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# Status Quo Vs. Change in the Face of Death and Uncertainty

Justin S. Cheng  
*Loyola University Chicago*

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LOYOLA UNIVERSITY CHICAGO

STATUS QUO VS. CHANGE IN THE FACE OF  
DEATH AND UNCERTAINTY

A DISSERTATION SUBMITTED TO  
THE FACULTY OF THE GRADUATE SCHOOL  
IN CANDIDACY FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

PROGRAM IN SOCIAL PSYCHOLOGY

BY

JUSTIN S. CHENG

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Reason, fighting a losing battle, needs the best propaganda it can get.

—Paul Feyerabend

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## **ABSTRACT**

A diverse array of empirical research posits a general tendency for people to prefer the status quo over change, all else being equal. In two experiments, we explore the status quo preference phenomenon from a motivated cognition, uncertainty management perspective. Extending the precepts of several related empirical traditions (e.g. terror management theory, system justification theory and related topics), we explore the premise that uncertainty management processes activate social cognitive mechanisms directly favoring the status quo, similar to previously established process mechanisms such as terror management. Across two studies, we find support for the idea that both uncertainty and mortality salience magnify peoples' pre-existing ideological preferences.

## CHAPTER ONE

### INTRODUCTION

The status quo delineates that which *is*, in contrast to that which *is not*. We know that which is, while that which is not remains unknown. Change in the field of everyday life can be daunting; it is often associated with cost, risk and danger. Regardless of its fruits, change is necessarily more laborious than maintaining the status quo. Change requires action, whereas the status quo does not. An individual is responsible for his or her actions, whereas no such responsibility can be conferred on account of an individual's non-actions. In this way, the status quo implicitly suggests a low level of personal risk, while endorsing change suggests the opposite. The status quo tacitly indicates the known or certain, while the alternative indicates the unknown or uncertain. Conceptual and semantic linkages pair the status quo with favorability, while pairing its opposite with unfavorability. Such are just some of the many forms and manifestations of status quo preference.

A large and established body of empirical literature demonstrates that all else being equal, individuals prefer extant status quo realities to alternatives (Eidelman & Crandall, 2009; Eidelman, Crandall, and Pattershall, 2009). This may occur even when status quo realities appear to be, from a rational choice perspective, non-optimal. The status quo preference literature suggests that at an individual as well as a societal level,

humans accept or justify status quo realities which are far from ideal, preferring the “devil they know” over uncertainties associated with change.

Samuelson and Zeckhauser (1988) established that when a choice between endorsing the status quo vs. an alternative is presented to an individual, the status quo tends to be preferred (for reviews, see Anderson, 2003; Eidelman, et al., 2009). People may prefer the status quo because the potential risks or costs of change are perceived to outweigh the perceived benefits, as suggested by *Prospect Theory* (Kahneman and Tversky, 1979) and the associated principle of *loss aversion*. Furthermore, people may prefer the status quo because of cognitions or feelings that the status quo ultimately serves them or the greater good, a psychological mechanism postulated by theoretical perspectives including *System Justification Theory* (Jost and Banaji, 1994) and *Belief in a Just World Theory* (Lerner, 1980). People may rationalize the status quo in order to make the best of extant realities via self-serving cognitive construals. That is to say, people may hold beliefs and worldviews that the universe is generally fair and good, in effect producing just outcomes, manifested in status quo realities. Psychological processes lending favor to the status quo may all operate in concert to varying degrees, dependent upon the salient features of the judgment at hand and the individual characteristics of the perceiver. In any case, the resultant phenomenon is an enduring psychological preference for the status quo.

### **Evaluative Advantages of the Status Quo**

The status quo indicates “the way things are,” which tends to be psychologically connected to “the way things ought to be.” With intellectual roots tracing back to the Age

of Reason, scholars have long posited that the connection between existence and goodness is embedded in our worldviews and unspoken assumptions regarding the laws that govern the universe. David Hume (1739/1978) referred to this seemingly irrational psychological confound as the *is-ought fallacy*, terminology which remains in use today in describing the phenomena, while G.E. Moore (1903), in his magnum opus *Principia Ethica*, coined the term *naturalistic fallacy* to refer to an essentially identical principle. In both cases, such “fallacies”<sup>1</sup> are described as biasing evaluative judgments in favor of that which *is*, that which does exist; in other words, the *status quo*. Observe that the term *status quo* conjures something of a historical, political or cultural significance; this is not happenstance, but rather a marker of its social-cognitive underpinnings. Individuals assume that extant reality exists for a reason, a purpose, or by some natural or divine law. As such, the perceived status quo holds an advantage against its contenders by means of its implied benevolent structural integrity, and through this process the association between *goodness* and *existence* is forged. This inference appears to be active rather than passive, causing individuals to zealously dismiss, disregard or devalue status quo alternatives, particularly in matters of choice (for reviews of this literature, see Anderson, 2003; Eidelman et al. 2009). I shall now specify several sub-structural mechanisms which have been empirically demonstrated to confer an evaluative advantage upon the status quo.

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<sup>1</sup> Philosophical debate ensues as to whether or not the is-ought/naturalistic fallacies can be properly referred to as fallacious in a strict definitional sense; See, Frankena (1939) for an in depth discussion of this issue.



**The familiarity/mere exposure effect.** A substantial body of empirical research demonstrates that all else being equal, repeated exposure to a stimulus facilitates a positive attitude toward it (For a meta-analytic review, see Bornstein, 1989). This effect has been found to occur in respect to a wide array of judgment stimuli including persons, words, visual images, and musical pieces (Eidelman et al., 2009). Generally, this line of research stipulates that that which is oft encountered is well known, and that which is well known is perceived as safe and good. Therefore, by processes of mere exposure, the stimulus increases in evaluative favor while simultaneously becoming the status quo.

**Dissonance reduction effects.** Much dissonance reduction research demonstrates that the desirability of chosen options is enhanced, while the desirability of foregone options is devalued (Beasley and Joslyn, 2001; Kay, Jiminez, and Jost, 2002; Shultz and Lepper, 1996). The commitment to our own choices causes us to exaggerate the difference between the desirability of that which is chosen compared to the desirability of that which is rejected. This motivated cognition serves to reduce the post decision cognitive dissonance that occurs subsequent to a choice based selection, and manifests as both a valuation of the selected choice in addition to an even greater (in relative magnitude) devaluation of the non-selected choice (Brehm, 1956). This valuation of chosen options coupled with a devaluation of rejected options has been referred to as the “spreading of alternatives” effect (Eidelman et al., 2009).

In regards to the enhancement of chosen selections, the less positive features of the chosen selection are enhanced by being mentally transformed from unfavorable to favorable, as opposed to, for instance, an evaluative boost regarding the most desirable

aspects of the choice (Gerard and White, 1983). Additionally noteworthy is the consistent finding that enhancement of selected choices is greatest when the spread of available options is relatively *unattractive* (Shultz and Lepper, 1996; Shultz, Leveille, and Lepper, 1999). As suggested by Hume (1739/1978) and Lerner (1980), the status quo usually indicates a “chosen” alternative in the arena of everyday life, if not by the individual, then by society or natural law. Return now to my previous assertion that the term *status quo* is politically or socio-culturally connotative in nature. The supposition is that current social and political entities (persons, institutions, and cultural norms) are perceived as chosen (at least relative to nonexistent entities), and thus their desirability is magnified, lending further advantage to the status quo.

Kay et al.’s (2002) study on post-election candidate evaluation discovered that winning candidates are enhanced in value following their victory, while losing candidates are devalued following their loss. Prior to an election decision, the candidates are seen as much closer in terms of desirability, yet after the results are tallied, this spreading of alternatives effect results in a sharp devaluation of the non-elected, accompanied by an evaluative enhancement of the elected. Scholarship on the incumbency advantage appears to corroborate this general premise, demonstrating a particularly potent advantage for previously victorious candidates, controlling for a large host of other factors relevant to electability (for a review, see Ansolabehere and Snyder, 2002).

Insofar as an election represents a collective choice, then cognitive dissonance theory can be applied to interpret the empirical effects just described. That is to say, subsequent to the nation’s choice for president, collective evaluations shift such that the

winner comes to be perceived as relatively more favorable while the loser comes to be perceived as relatively less favorable. Analogously, the longstanding literature in cognitive dissonance theory demonstrates that with respect to a wide variety of personal choices, individuals' post-choice evaluations shift towards favoring the chosen alternative (Beasley and Joslyn, 2001; Shultz and Lepper, 1996, Brehm, 1956, Lyubomirsky and Ross, 1999; For a review, see Kay, Jiminez, and Jost, 2002).

Ironically, the effects of cognitive dissonance as just described may potentially self-contradict at the individual and group levels. Consider, for instance, a person who votes for the candidate who will eventually lose. After voting for their candidate, both dissonance theory and status quo preference theories predict an evaluative boost for the *chosen* (voted for) candidate. When this individual finds that their candidate has lost the election, however, both dissonance theory and status quo preference theories would predict a relative evaluative boost for the *elected* candidate. Whether the final net effect for this voter would be that of growing favor or disfavor for the elected candidate, however, is subject to a smorgasbord of extraneous factors. Nonetheless, both dissonance theory and status quo preference theories tend to converge on similar predictions regarding how individuals react to and evaluate stimuli which come to be interpreted as the status quo.

**Negative perception of reformers.** Thus far I have posited that alternatives to the status quo are generally devalued, which can have a net effect of bolstering the status quo. Relatedly, research demonstrates that reformers (those who seek to change the status quo) are viewed more negatively than those who endorse the status quo. This is in part

due to evaluations that those who seek to change the status quo are “extremists” with difficult personalities and unreasonable reform goals. Robinson, Keltner, Ward, and Ross (1995), for instance, found that individuals who support status quo sociopolitical norms view the magnitude of disagreement between supporters of the status quo vs. change as much more extreme than do the reformers themselves. In other words, status quo supporters view reformers as “further way” from the proper position than reformers view status quo supporters. The resultant effect is that reformers are less likely to demonize their political enemies, in comparison to those who oppose reform. Since the status quo already holds an evaluative advantage amongst political centrists, further fuel is added to the flame of change devaluation via this novel mechanism.

People and ideas are guilty by association; ideas are measured by the characters who proffer them, and individuals are assessed by the values and ideas they endorse. A biased negative perception of reformers’ ideas transfers to a biased perception of the personality characteristics and moral character of the reformers themselves. Robinson et al. (1995) notably found that those seeking to change the status quo regarding abortion laws are seen as unreasonable and extreme by *both sides* of the abortion debate. Similarly, Keltner and Robinson (1997) found that “revisionist” faculty within an English department (those who challenged the status quo perspective), were judged by people on *both sides* of the issue as less reasonable and more extreme individuals, indicating an overall devaluation of reformers, even by those who are initially not particularly antagonistic toward the reforms themselves. If issue stances endorsed by reformers are

seen as more extreme in a systematically biased fashion, then they may also be viewed as undesirable and/or unattainable.

O'Brien and Crandall (2005) further exhibit the presence of prejudicial attitudes toward reformers with empirical evidence indicating that reformers are viewed as more self-interested than status quo supporters. As such, reformers are viewed as being relatively selfish, unscrupulous individuals looking out for their own best interests as opposed to those of society. The implications of such prejudicial attitudes towards reformers (and by extension the reforms they advocate) are clear. If it is believed that reforms are spearheaded by relatively selfish and untrustworthy individuals, then the reforms for which they advocate are also to be viewed with suspicion.

**Mere existence bias.** Perhaps the most distilled mechanism of evaluative preference for the status quo is the recently coined *mere existence bias*. Scholarship on the mere existence bias indicates that even under meticulously stringent laboratory conditions in which the contributing effects of other status quo preference mechanisms (e.g. those discussed thus far) are controlled for or eviscerated, preference for the status quo remains (Eidelman et al. 2009). This recent line of empirical investigation suggests that evaluations of positive value are *directly* derived from a particular position being labeled as the status quo, complementing the more circuitous processes such as those presented earlier, in addition to the yet to be discussed rational choice mechanisms.

This direct evaluative association further reinforces shared networks of semantic activation, grouping the concept of *status quo* with positivity and its alternatives with

negativity. In other words, thoughts of the status quo automatically activate value judgments, due to their relation to that which is known, secure, safe and natural. Eidelman et al. (2009), for instance, find that a seemingly value absent distinction between a status quo reality and an alternative still garners preference for the status quo, even when: the substantive content of the status quo is counterbalanced over multiple conditions, the effects of perceived cost are statistically controlled for, the participants have no personal stake in the issue, and pre-existing attitudes toward the two options are nonexistent or minimized to the point of practical irrelevance. In these studies, participants rated the status quo as more “good,” “right” and “the way things ought to be,” regardless of the substantive content of the status quo position.

Numerous cognitive processing mechanisms stack the deck in favor of positive evaluations regarding the status quo. Rooted in a characteristically cognitive perspective, Fishbein & Ajzen’s (1975) *Theory of Planned Behavior*, for example, posits that factors such as biased accessibility and belief strength will each influence evaluative outcomes in their respective stages of cognitive processing. Biased *accessibility*, for instance, may render positive outcomes associated with the status quo more accessible than positive outcomes associated with choosing alternatives. Likewise, negative outcomes associated with the status quo may be less accessible than negative outcomes associated with choosing alternatives. Another relevant factor from Fishbein & Ajzen’s (1975) theoretical model is *belief strength*, in this case regarding the likelihood of outcomes expected to result from going with the status quo vs. an alternative. Specifically, positive outcomes associated with the status quo may be viewed as more likely to ensue than positive

outcomes associated with an alternative. Likewise, negative outcomes associated with the status quo might be viewed as less likely to ensue than negative outcomes associated with an alternative. Hailing from a similar perspective, Krosnick (1988) demonstrated that attitude importance weighting is related to the spreading of alternatives effect, such that higher levels of importance predict exaggerated evaluative differences among competing alternatives, potentially serving as a multiplier effect in terms of the status-quo's evaluative advantage.

Eidelman et al. (2009) describe the existence bias as a heuristic; and like other heuristics, it serves to enhance processing efficiency, if not accuracy. Models concerning biased information processing at various stages from encoding to retrieval offer a valuable lens through which to understand the roots of status quo bias. A central premise of the mere *existence bias*, however, is that the association between existence and goodness requires no supposition of rational inputs in order to manifest, though rationalizations are to be expected. In the words of Eidelman et al. (2009), pp. 73, “Although assumed reasons may undergird some forms of existence bias, they do not seem necessary...” I shall further elaborate on the nature of these “assumed reasons” in the following section.

### **Rational Choice Perspectives**

In many cases, status quo preference can be accounted for by invoking principles of behavioral economics. That is to say, the magnitude of costs associated with change may, in the eyes of the perceiver, counteract and offset the expected magnitude of its potential benefits. Consider this principle from a strictly mathematical perspective. If the

utility of the status quo is rated as a three (with higher numbers denoting greater desirability), and the utility of the alternative is rated as five, a rational individual would be expected to engage in change only if the expected cost associated with the change is less than two. *Cost* in this sense does not merely refer to money. Rather it denotes a perceived loss of any sort, whether it be time, personal security, mental effort, et cetera. Change necessarily requires action, even in the most minimal sense of mentally considering its adoption. The status quo alternative must therefore necessarily invoke some kind of extra cost, serving to balance the utilitarian equation in favor of the status quo.

Samuelson and Zeckhauser (1988) coined the term *status quo bias* to refer to this general tendency to evaluate the status quo as superior for reasons pertaining to its perceived advantage in utility. Rational choice, utilitarian, considerations are also a key component of theoretical perspectives including *Social Dominance Theory* and *System Justification Theory*, which posit that those who benefit the most from the status quo in society tend to be its most formidable defenders. Such individuals tend to further promulgate what Jost and colleagues might deem a “legitimizing myth”: the belief that that excessive societal costs tend to accompany social change. Rational choice approaches tend to construe status quo justification as a generally rational endeavor, serving the interests of the self or group. It is critical to note that such cognitive inputs need not be formed in a “rational” manner for rational choice models to apply. Rather, similar to the cognitive process models described previously, rational choice models aim



to describe how such inputs (whatever their origin) enter into a cognitive equation in order to produce predictable evaluative outcomes.

*Loss aversion* is key component of *status quo bias*, as first conceptualized by Samuelson and Zeckhauser (1988). In experiment one of this series of studies, participants were asked to rate the attractiveness of a variety of financial investment strategies. Preference for the status quo was observed, controlling for the substantive content of the status quo vs. the alternative. Additionally, Samuelson and Zeckhauser found that university employees held a biased preference toward accepting the university healthcare plan in which they were already enrolled, while no preference was observed for individuals who were not already enrolled in any plan (and thus, had no status quo enrollment status). In other words, when a particular plan had the opportunity to be seen as the status quo, it was preferred against an alternative, yet such an effect did not emerge when neither option was perceived as the status quo.

Kahneman and Tversky (1979) were perhaps the first to empirically establish that people tend to disproportionately weigh losses against gains. Further research establishes that all else being equal, people evaluate losses as more severe than gains of the same magnitude (Kahneman, Knetsch, and Thaler, 1991). As such, the perceived costs of switching from the status quo to an alternative may be unduly magnified, resulting in status quo preference. Other experimental research establishes that in respect to financial decisions, people imagine greater regret for action than inaction, even when the outcomes of each option are essentially identical (Kahneman, Slovic, and Tversky, 1982; Landman, 1988; for a review, see Anderson, 2003).

In a popular experimental template which may be referred to as the “lottery ticket et paradigm,” participants are given a lottery ticket and then offered an opportunity to exchange it with another participant. In these studies, participants overwhelmingly choose not to trade their ticket for another of equal value and probability of winning, even when enticed with additional incentives to switch. Such findings elucidate the imbalanced psychological consequences of counterfactual regret; a person with a losing ticket who failed to switch would of course experience regret, but not nearly as much as a person who possessed a winning ticket and traded it away. For a review of empirical studies which utilize the lottery ticket paradigm, see Van de Ven and Zeelenberg (2011). Such findings accord with a lay understanding of attributional responsibility, by which people are generally held responsible (blamed) for their actions, but not their non-actions. For this reason, a non-action (which functionally serves as an implicit endorsement of the status quo) is tacitly preferred.

I again note that inputs to rational choice “equations” may be derived from processes of biased motivated cognition, and that hot cognitive theoretical models of status quo preference may harbor rational choice components. The categorical distinction between purely rational choice explanations for status quo preference versus those rooted in cognitive and/or evaluative biases can at times be blurry. For example, Samuelson and Zeckhauser (1988), in their formulation of the *status quo bias*, focus heavily on principles of aversion toward risk, loss, and regret as explanatory mechanisms. Status quo preference rooted in such human tendencies may be viewed as relatively rational or irrational, depending upon how one wishes to define rationality. If one were to author a

decision making algorithm with the goal of maximizing total utility, it would appear nonsensical to specify special tendencies toward risk, loss and regret aversion; choices should be based solely on the expected value of decision outcomes.

Some theorists would define “rationality” in a manner that leads them to conclude that it is rational to diverge from expected utility when dealing with events which occur extremely rarely, for a variety of reasons, including societal norms and values which dictate that people act carefully, without risking the wellbeing of themselves or others. Unlike expected utility theory, factors such as subjective norms are taken into account by the theory of reasoned action and similar perspectives (Ajzen & Fishbein, 1980). According to such theories, the effect of expected utility (i.e. attitude toward the behavior) can be overshadowed by the effect of internalized societal norms when individuals formulate an attitude or behavioral decision.

Furthermore, if one takes into account anticipated counterfactual regret, it can be construed as “rational” to make decisions which knowingly do not align with expected value maximization. Consider for example that a benevolent stranger approaches you and offers you a choice: a \$5 million dollar gift now, or the chance to flip a coin to win more. If the coin comes up heads, you win \$20 million, but if it comes up tails, you win nothing. The coin-flip option has an expected value of \$10 million, which is twice the expected value of the foregone option, exceeding the expected value of that option by \$5 million. Yet, one can plainly see that it is not at all irrational to take the \$5 million dollar option. Considering the effects of anticipated counterfactuals, the “psychological expected value” of each of the potential outcomes can often diverge from mathematical

calculations of expected value, as illustrated by the above case. In a similar fashion, loss and risk aversion might generally be considered symptoms of a rather sophisticated sense of rationality. In any case, rational choice theories of status quo preference focus primarily upon relatively “cold” cognitive inputs, as opposed more motivational or emotional “hot” factors.

### **General Conclusions**

As examined in this chapter, a variety of psychological processes lend to the phenomenon known as *status quo preference*. I have thus far overviewed some of the key explanatory mechanisms by which cognitive and evaluative tendencies bolster the status quo. In this dissertation, I focus on the components of status quo preference hypothesized to originate in motivations of a highly abstract, symbolic and primordial nature. Fundamental human drives to escape existential darkness and find one’s place in the universe harbor implications for understanding status quo preference. Existential, humanistic, affective and motivational schools of thought have long posited that a large array of human cognitions and behaviors are shaped by underlying epistemic and existential drives. Status quo preference is a phenomenon congenial to this thesis, such that the status quo implies that which is known, safe, secure, and good. The alternative implies that which is epistemically ambiguous and existentially frightening. I herein posit that affective and motivational forces of this nature play a direct role in the psychological phenomena of status quo preference. I shall now shift the discussion toward the nature of such “forces,” namely, the psychological need to manage uncertainty.

## **CHAPTER TWO**

### **THE UNCERTAINTY MOTIVE**

Humanity strives to progress from a position of uncertainty toward certainty, from ignorance toward knowledge, from insecurity toward security, and, ultimately, from negativity toward positivity. This principle is embodied in western mythological symbolism, whereby the unknown is represented by darkness, and the known represented by light. The physical act of shining a flashlight into a dark forest illuminates the contents of that forest, allowing one to successfully navigate the terrain. Allegorically, that which is known is relatively certain, secure and good; while that which is unknown is relatively uncertain, insecure and bad. The certainty, security, and predictability that knowledge brings “illuminates” us, separating dark from light.<sup>2</sup>

In the psychological literature, the term “uncertainty” describes an experience which occurs when individuals face incompatibility between different cognitions, between cognitions and behaviors, between cognitions and experiences, or when one faces an inability to predict the future or know the world (Van den Bos and Lind, 2002; Hogg, 2000). This wide reaching definition captures several qualitatively distinct social aspects of the uncertainty experience. We may orient the concept of uncertainty in relation to the future, the world, or the self. In each case, uncertainty denotes a state of

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<sup>2</sup> These remarks should be viewed as a description of social cognitive linkages, and should not be interpreted as representing the author’s worldview.

ignorance, of not knowing. It is the position of humankind to attempt to convert the unknown into the known, to move from a state of certainty toward uncertainty. Through such processes people find meaning, which brings comfort and security.

### **Uncertainty Harbors Both Epistemic and Existential Implications**

I use the term *epistemic motivation* to indicate the human drive to seek knowledge, including the need to verify that one's mode of knowledge acquisition is valid. I use the term *existential motivation* to indicate the human drive to seek meaning, particularly meaning relevant to the self. We use the term "meaning" in the sense of Heine & Proulx (2006), progenitors of the *Meaning Maintenance Model*, who state, "...people have a need for meaning; that is, a need to perceive events through a prism of mental representations of expected relations that organizes their perceptions of the world." (Heine & Proulx, 2006, p. 88). Stated otherwise, *meaning* refers to systems of "expected cognitive associations" (Proulx & Heine, 2006). These cognitive associations encompass "anything that one might expect to be related to anything else—people, places, objects, events—in any way that they could be construed as related—causally, spatial-temporally, teleologically," (Proulx & Heine 2006, p. 310). Interestingly, Proulx & Heine (2006) suggest that when people encounter a stimulus in which they cannot find meaning (i.e. expected relations are violated), a fluid compensation occurs in which meaning is sought. Often this meaning takes the form of "cultural worldviews" which function as schemas informing one as to proprietary relations among people, objects, and concepts encountered in the social world.

When expected relations between inanimate objects or concepts not relevant to the self are violated, such cases should be most accurately described as “epistemic,” if they primarily challenge knowledge frameworks. When expected relations relevant to the self are violated, such cases should be most accurately described as “existential,” if they primarily challenge ideas pertaining to the understanding of the self and human experience. As an example of this distinction, consider what people’s reactions would be to news of confirmed intelligent extraterrestrial contact in outer space. For many, this news would be existentially challenging, since it would almost certainly force individuals to confront sacred beliefs regarding the self, humankind, and God. The primary alarm to the psyche resulting from such news has less to do with a mere violation of non-self-relevant knowledge structures, and more to do with metaphysical, spiritual, existential issues. Now contrast this with another hypothetical scenario that beyond light-speed travel is discovered to be possible. Encountering this news would likely be epistemically challenging for many, as this news contradicts information which has been wholly accepted and taught as scientific fact for many years in classrooms worldwide. The thought of beyond light speed travel, however, does not readily conjure the kinds of uncertainties as those which would be expected by the former (extraterrestrial encounter) case described above. This is because any self-relevant implications of the latter (beyond light speed travel) case are not readily apparent, at least by comparison with the former case. Of course, the psychological impact of any expected-relations violating information will vary widely by individual and culture. Epistemic and existential motivations are expected to share a great deal of overlap in terms of psychological impact, since

knowledge is determined by our meaning frameworks, and our sense of meaning is determined by our knowledge frameworks.

William James (1890) was perhaps the first psychologist to posit that uncertainty reduction is motivated by a need to “simplify psychological experiences.” Other notable early psychologists, such as Ernst Jentsch (1906/1995), who expounded upon the psychological phenomena to which he referred to as “the uncanny,” found inspiration in James’ early hypotheses in this domain. Other emerging schools of thought, including psychoanalysis, took on a somewhat different perspective (e.g. Freud, 1919/1958). Empirical evidence has now been garnered in favor of this general “epistemic simplicity” perspective, including studies which demonstrate that uncertainty reduction processes are partially motivated by a need to reach cognitive closure (Kruglanski and Webster, 1996). Such research suggests that when people do not have the cognitive capacity to systematically process, they seek certainty. This frees up cognitive resources allocated to uncertainty management and simplifies psychological experiences.

Sigmund Freud (1919/1958), Frederic Barlett (1932) (a predominant forerunner of social cognitive psychology), and other emerging schools of psychological thought also became interested in the construct of “uncertainty,” and posited an uncertainty reduction drive mechanism conceptually distinct from the search for epistemic knowledge as touted by James (1890). They posited that uncertainty management was fundamentally rooted in a quest for *meaning* rather than knowledge. That is to say, uncertainty management was hypothesized to be motivationally driven by man’s need to “connect” with the world around him, as opposed to being motivated by mere intellectual curiosity. Thus, the



orientation of Bartlett (1932), Freud (1919/1958) and others toward uncertainty management can be characterized as existentially situated, in contrast to James' (1890) and Jentsch's (1906/1995) more epistemically oriented point of view.

The term *epistemic* refers to certainty regarding one's knowledge about the world, while *existential* refers to certainty regarding one's relational connection to the reality of existence, or the perception of being self-aware. Epistemic uncertainty may harbor existential concerns, and existential uncertainty in turn may harbor epistemic concerns. One could reasonably argue that existential issues are the ultimate source of uncertainty's negative valence, insofar as it is not lack of knowledge itself which individuals find disturbing, but rather what that lack of knowledge stands to imply about existential meaning and value. In any case, these two subconscious motivational sources of uncertainty may operate in conjunction to produce a negative affective experience, and, due to the negative valence associated with psychological uncertainty, individuals are generally motivated to reduce it.

As a brief demonstration regarding the difference between epistemic and existential psychological domains, I offer some examples of characteristically epistemic and existential questions. "Is oxygen necessary to breathe?" "Does inflation decrease the value of the dollar?," "Are carbon dioxide emissions a cause global warming?," "Is the world flat?" are primarily *epistemic* questions, though may harbor varying degrees of existential implication. Questions such as "What is the purpose of my life?," "Does everything "happen for a reason"?," "Why am I living?," and "Who am I? What is my place in the universe?" would be more accurately characterized as primarily *existential*.

### **Generalized Worldview Defense as a Mechanism of Uncertainty Reduction**

When an individual is faced with uncertainty, affirming one's worldview can be palliative. This is because worldviews effectively function to address core existential questions. A plethora of empirical research indeed demonstrates that the affirmation or defense of cultural worldviews reduces negative feelings associated with subjective uncertainty (Hogg, 2000; Hogg, 2005; Hogg, 2007; Van den Bos, Poortvliet, Maas, Miedema, and Van den Ham, 2005; for a review see, Van Den Bos, 2009). Personally and culturally valued worldviews convert the world into a predictable place and help individuals navigate reality, therefore satisfying epistemic needs. Worldviews are largely shaped by life experiences of an epistemological nature. Hence, individuals naturally draw upon their worldviews in order to resolve or interpret epistemic uncertainties. When worldviews do not offer an acceptable level of epistemic uncertainty reduction, one will engage in information seeking until epistemic needs have been satisfied. Epistemically, worldviews buffer against threats by suggesting that uncertainty can be resolved via the acquisition, retrieval, or reconceptualization of information. Worldviews also help secure an appraisal of meaning in the world, and in doing so satisfy existential needs.

Worldviews can attenuate existential anxiety by providing a mechanism through which people may symbolically transcend existential despair, as suggested by *Terror Management Theory* and related perspectives (Greenberg, Solomon, & Arndt, 2008).

Extreme feelings of existential despair often culminate in an attraction toward totalistic worldviews (for a comprehensive review, see Hogg and Blaylock, 2012).

Markedly totalistic worldviews, including various forms of religious fundamentalism and

sociopolitical utopianism, leave little or no room for existential doubt or despair. This perhaps accounts for the particularly seductive nature of these worldviews, which ultimately manifest in the form of political and religious cults. Totalistic worldviews declare absolute and inerrant certainty regarding the nature of the ideologies contained within them, and also tend to firmly stake a claim on the nature of existential purpose, or the meaning of life. As such, the upholding of cultural worldviews helps to ward off existential uncertainty and assuage its associated negative affect (Van den Bos, Heuven, Burger, and Fernández Van Veldhuizen, 2006). Consequently, when individuals are exposed to situations which magnify uncertainty, the implicit goal of worldview affirmation is automatically activated (Van den Bos, 2001; Van den Bos et al., 2005).

For example, Van den Bos, Euwema, Poortvliet and Maas (2007), found that priming uncertainty salience caused exaggerated negative affective responses toward individuals criticizing their home country (a worldview threat). In a second study, Van den Bos, et al. (2007) found that individuals who tend to perceive uncertainty as very emotionally upsetting condemned homeless people to a particularly large degree. Homelessness is implicitly seen as a symptom of cultural deviancy and/or sociopolitical failure. In either case, the prevalence of homelessness is implicitly worldview threatening. Hence, Van den Bos, et al. (2007) argue that the negative reactions exhibited by uncertainty sensitive individuals elucidate a direct connection between subjective uncertainty and the condemnation of worldview violators, or those who challenge the normative status quo.

A religion is a unique worldview system which ties the natural world to supernatural or metaphysical concepts. Religion, generally speaking, attempts to answer life's deep existential and epistemic questions including the "meaning of life" and the proper relation among objects and beings within the universe. A review by Hogg, Adelman & Blagg (2010) corroborates this perspective, offering the case that religions are "...entitative groups that provide a moral compass and rules for living that pervade a person's life, making them particularly attractive in times of uncertainty." Uncertainty is diminished by reducing complexity to simplistic forms. Shades of grey are reduced to black and white, evil and good et cetera. Total faith in an inerrable leader and simple solutions to life's problems tend to be markers of more dangerous religious cults, whose doctrinal attempts to address uncertainty become as extreme as the cultists' need to squelch it. In the words of Jason Begue, former high ranking member of the cult of Scientology, "One of the major things they that sell to get people to buy their services is: certainty. You will have certainty in your life, which is very seductive. People want to know. People want to know. It's difficult, I think, for people to wonder, to not know. And so, they're seduced, by this certainty. But when you think about it, it can be quite dangerous."

Epistemic ideologies proffered by religion are generally thought of as coming from a divine being or principle, and therefore must be epistemically correct, in effect eviscerating epistemic doubts and uncertainties. Van den Bos, Van Ameijde, and Van Gorp (2006) found in a nationally representative sample including more than 1,500 participants, that personal uncertainty concerns were positively related to negative

affective reactions toward statements critical of religion. Importantly, this effect emerged strongest among individuals who viewed personal uncertainty as emotionally threatening. Further along these lines, the individual difference variable of *uncertainty avoidance* has been found to be negatively correlated with both tolerance of diversity and openness to experience (Hofstede, 2001). Other experimental evidence demonstrates that people who are made to feel uncertain more zealously defend threats to their worldviews, in comparison to individuals not made to feel uncertain (McGregor, 2004; McGregor and Marigold, 2003; McGregor, Zanna, Holmes, and Spencer, 2001). Furthermore, Hogg (2000; 2004; 2005) demonstrates that the experience of personal uncertainty elevates the attractiveness of strict orthodox worldviews and ideologies. With these statements, I do not intend to paint religion as psychologically undesirable. Rather, I suggest that religion easily lends itself to the task of epistemic and existential uncertainty reduction.

### **Uncertainty and Negative Valence**

The empirical literature firmly establishes that uncertainty tends to be associated with negative affect, at either or both implicit and explicit levels (Kruglanski, 2004; Van Den Bos, 2009; Van Den Bos, et al., 2005; Hogg, 2000; Fiske and Taylor, 1991; Sorrentino and Roney, 1986). In fact, some psychological definitions of uncertainty have gone so far as to work the negative valence associated with uncertainty into its very definition, such as Monat, Averill and Lazarus (1972, pp. 237), who define uncertainty as “the period of anticipation prior to confrontation with a potentially harmful event.” Similarly, prominent contemporary uncertainty scholar Kees Van den Bos (2009, pp.

186), defines personal uncertainty as “subjective sense of doubt or instability in self-views, worldviews, and the interrelations between the two.”

Studies on the physiological effects of uncertainty have demonstrated that experiencing uncertainty coincides with a physical stress response characteristic of perceived threat, including hormonal changes, raised blood pressure, and immune response activation (see Zakowski, 1995; Mason et al., 1973). Individuals exhibiting high levels of *emotional uncertainty* (as measured by the emotional uncertainty scale) are thought to demonstrate a maladaptive coping strategy in which subjective uncertainty is particularly emotionally upsetting. Individuals scoring high on this measure are likely to respond to subjective uncertainty with particularly high levels of frustration and anxiety. Additionally, highly emotionally uncertain individuals tend to score high on measures of neuroticism and emotional rumination (negatively valenced). They also tend to be more preoccupied with stressful situations, and tend to exhibit relatively low self-esteem (Greco and Roger, 2001).

### **The Uncertainty Management Drive**

Philosophers of mind have long posted a universal human need to find certainty in life. The discussion of such ideas traces at least as far back as classical antiquity, but can more recently be traced to the intense 19<sup>th</sup> psychological philosophizing which predated the psychological sciences, notably that of Søren Kierkegaard. In the early 20<sup>th</sup> century, scholars who would prove to be incalculably influential at the crossroads of philosophy and psychology, such as Theodor Adorno and Martin Heidegger, produced writings which spoke to the psychology uncertainty and its sociopolitical implications.

When psychology began to emerge as a distinct discipline in the late 19<sup>th</sup> century, ideas surrounding subjective psychological uncertainty and its epistemic existential implications were explored by early psychological theorists of diverse perspectives including William James, Erich Fromm, and of course, Sigmund Freud. The rise and fall of Behaviorism and its antithesis, Cognitivism, shifted the focus of the psychological sciences away from phenomena of this nature during the latter half of the 20<sup>th</sup> century. Leading contemporary scholars, however, have begun to revitalize scholarship on this and related topics with an exciting abundance of empirical evidence consistent with an existentialist account of uncertainty management. See Hogg & Blaylock (2012), for a general survey of the burgeoning cotemporary research in this content domain.

Indeed, a plethora of research firmly establishes the connection between uncertainty and negatively valenced affect (for reviews of this extensive literature, see Hogg, 2000; Van den Bos, 2009a). Uncertainty would not need to be “managed” (reduced) if it tended to be positively valenced. The valence of uncertainty, however, is not necessarily always negative in connotation. The affective valence of uncertainty may be moderated by context and situation. The emotionally optimal or desired level of uncertainty is likely to systematically vary across both persons and situations. Empirical research does indeed demonstrate that the experience of personal uncertainty may foster awe, curiosity, and other positively valenced cognitive and affective experiences under the right conditions (e.g. McGregor and Marigold, 2003; Sorrentino, Bobocel, Gitta, Olson, and Hewitt, 1988; Weary and Jacobson, 1997). The idea that uncertainty may arouse positive emotions related to awe is not new to the field of psychology. In the

words of Erich Fromm (1949), “The quest for certainty blocks the search for meaning. Uncertainty is the very condition to impel man to unfold his powers.” Despite the apparent assertion here that uncertainty is inspiring, Fromm (perhaps unwittingly) suggests a relationship between uncertainty and a search for meaning congenial to the present thesis. Certainty may be accompanied by the lack of a search for meaning (lacking not because individuals do not desire meaning, but because this desire has been satisfied by certainty).

In conclusion, the uncertainty management assumption has received a great deal of empirical support (for a review of this literature, see Van den Bos, 2009a). The core underlying assertion of the uncertainty management literature posits that people carry a deep seated drive to feel certainty pertaining to their general knowledge structures (epistemic certainty) and self-relevant knowledge structures (existential certainty). Certainty lends meaning to existence, sets expectations for future events, and guides behavior (Hogg, 2007). As previously discussed, experiencing uncertainty is generally aversive, and therefore, the psychological reaction to the experience of uncertainty is to move away from it.

### **Uncertainty Management Perspectives: Points of Agreement and Contention**

As with all families of interrelated theoretical perspectives, uncertainty management models harbor a set of shared premises which unite them under common themes. Here I use the term *uncertainty management* to refer to social psychological theoretical perspectives which focus on the human motivation to reduce uncertainty. Uncertainty management models find common ground in the assertion that uncertainty is



tends to be experienced as aversive. Thus, people generally exhibit a drive toward uncertainty reduction (Festinger, 1954; Fiske and Taylor, 1991; Hogg and Mullin, 1999; Lopes, 1987; Weary, Jacobson, Edwards, and Tobin, 2001; Van den Bos, 2009a, Van Den Bos, 2009b; Van Den Bos, 2004, Van Den Bos, 2012; Hogg & Blaylock, 2012).

Such perspectives generally posit that *uncertainty* is closely tied to insecurity, control, and threat. Some models, such as Jost et al.'s (2003) *uncertainty threat* model of system justification, tie uncertainty and threat specifically to political conservatism. Other models, such as Hogg's (2007) *uncertainty identity theory*, suggest that uncertainty motivates rigid ideological views of any kind (for a similar perspective, see Greenberg and Jonas, 2003).

Most uncertainty management perspectives suggest that some form of fluid compensation or compensatory conviction process occurs in order to psychologically reduce uncertainty (Hogg 2007; Jost et al., 2003; McGregor et al., 2001). According to uncertainty identity theory, this is accomplished primarily by identification of the self with a group, since they assert that the self is the critical reference point, or integrative framework, of perception (Hogg, 2007). Other models, however, allow for fluid compensation to occur with equal zealotry in any domain with which certainty about expected relations between people, things, and ideas (e.g. meaning) can be affirmed, including through the affirmation of cognitive schemata and cultural worldviews. In the present thesis, I suggest that cognitively defaulting to the status quo is a predictable psychological reaction to conditions of uncertainty, as a consideration of alternatives opens the psychological gateway to uncertainty.

Uncertainty management models may also differ in the specific type and scope of uncertainty they intend to study. Some theorists prefer to focus on certainty of a highly personal and self-relevant nature, directly related to chronic insecurity and anxiety, and therefore place an emphasis upon the need to reduce *personal* as opposed to *informational* uncertainty, or a more encompassing *global uncertainty*. Different models may focus upon specific facets of uncertainty (e.g. death thoughts) or closely related constructs (e.g. control, threat, anxiety), which overlap with the concept of uncertainty to varying degrees (Van den Bos, 2009a, Van Den Bos, 2012, Hogg & Blaylock, 2012). Early scholarship at the crossroads of psychology and economics, however, did not specify any such hot cognitions for empirical effects which could now be described as evidence of the uncertainty management assumption. Hence, I remain hesitant to narrow the scope from which I am to investigate psychological uncertainty's relation to the status quo. A more global uncertainty might, for instance, activate a "fight, flight or freeze" response which affects multiple fluid compensation processes simultaneously.

### **Related Theoretical Perspectives**

The uncertainty management perspective proffered herein stems from a collage of related theoretical conceptualizations. All uncertainty management models share the common assumption that experiencing uncertainty causes individuals to seek or affirm certainty through available means. This draws similarly with the central tenet of cognitive dissonance theory, which posits that a cognitive inconsistency provokes the need to be resolved or reduced. Some uncertainty theorists conceptualize cognitive dissonance as a type of personal uncertainty (Van den Bos, 2009a). Though they employ markedly

different terminology, cognitive dissonance theory and uncertainty management theories serve to explain many of the same phenomena in a strikingly similar manner.

*Self Affirmation Theory* (Steele, 1988) posits that people cope with dissonance by engaging in a process of *fluid compensation*, whereby the negative effects of an inconsistency in one domain can be ameliorated by psychologically emphasizing consistency in another self-relevant domain. This “hydraulic” compensatory model is also endorsed by most uncertainty management theorists and provides a cogent conceptual mechanism for how uncertainty is managed. The premise of fluid compensation applies to uncertainty management such that the negative effects of uncertainty in one domain can be ameliorated by affirming certainty in another domain. The *compensatory conviction model* of uncertainty reduction (McGregor et al., 2001), presents the idea of fluid compensation, which states that individuals respond to uncertainty threats by holding stronger to the worldviews which provide structure, meaning, and comfort in their lives (see Hogg and Blaylock, 2012, for a review).

The affirmation of cultural worldviews and values ameliorates the negative experience associated with uncertainty because cultural worldviews and values are, in a generalized fashion, affirmative of epistemic and existential certainty. That is to say, cultural worldviews and values convey knowledge and meaning regarding relations between the self, others, and experiences in the social world, and are therefore epistemically and existentially palliative. This perspective is deeply influenced by the *Meaning Maintenance Model* (Proulx, 2012), pp. 82, which posits that “when mental representations of expected associations are violated by unexpected experiences, people

experience an uncomfortable arousal state that evokes the affirmation of alternative expected associations.”

The uncertainty threat model was formulated as an account of what motivates individuals to cling to political conservatism and endorse system justifying behavior, and its hypotheses can be seen as an extension of system justification theory. Therefore, theories which focus directly on uncertainty management share much common with a system justification perspective. Indeed, many such ideas are incorporated into the current model, in which I assert that uncertainty directly relates to status quo preference (which is, according to system justification theorists, one of the two core components of political conservatism). Similarly, terror management theory was formulated as an account of the psychological reaction to existentially threatening thoughts of one’s own death. As will soon be discussed in the subsequent section, *mortality salience* can in some respects be conceptualized as a special case manifestation of global uncertainty. The above discussed theoretical models are perspectives which help us understand the mechanics of uncertainty management models and how uncertainty might ultimately relate to our dependent variable of interest: status quo preference.

### **Uncertainty and Related Constructs**

**Uncertainty’s close synonyms.** *Unpredictability and uncontrollability* are two words which share a great deal of conceptual overlap with uncertainty, so much so that we consider them to be relatively core aspects of the construct of *uncertainty*. It is difficult to imagine a stimulus which invokes uncertainty without also invoking unpredictability or uncontrollability, and their social cognitive connotations are thus

jointly overlapping. Unpredictability and controllability may be considered as categorical features or subsets of uncertainty. A plethora of social psychological research demonstrates that people are motivated to perceive the world as predictable and controllable, and much of this research comfortably merges with the extant research on uncertainty (Allport, 1966; Kay et al. 2007; Van den Bos, 2009a, Plaks, Grant & Dweck, 2005).

Since unpredictability and uncontrollability are so intimately grafted to the construct of uncertainty in this way, we shall therefore not attempt to demonstrate that uncertainty influences outcomes independent of unpredictability and uncontrollability in the present experiments. Doing so would likely engender difficult to interpret data, as manipulating a construct and then statistically controlling for the effects of the manipulation is typically not recommended. In future research, the task of empirically and disentangling uncertainty from unpredictability and uncontrollability may be of interest, though such a task would be a relatively minor point in the context of the theoretical goals of the present studies.

Unpredictability is a narrower subset within the broader construct of uncertainty. It is the future oriented aspect of uncertainty, as the word “predict” suggests an appraisal about future events, while the more global uncertainty can pertain to the present or past, and may therefore exclude notions of predictability. Uncontrollability is a narrower subset within the broader construct of unpredictability (and therefore, also uncertainty). There exist events which cannot be controlled by the perceiver yet can be predicted with scientific exactitude, such as political outcomes, weather outcomes, and the outcomes of

scientific research studies themselves. Control suggests the appraisal that one can affect outcomes. Some theorists suggest that that lack of control is associated with feelings of personal uncertainty (Hogg, 2007; Van den Bos, 2001).

Control, however, may not be necessary or sufficient for uncertainty management effects to manifest. Many extreme uncertainty reducing ideologies and worldviews, for instance, relinquish personal control to external institutions and/or supernatural entities, while others emphasize agentic individualism. The psychological drive toward uncertainty management may be part of an evolutionarily ingrained mindset, set in motion by humanity's quest for knowledge in the service of bettering one's odds of survival. More directly, such processes may be seen as products of classical conditioning and/or the combined effect of various social, cognitive, and behavioral mechanisms.

**Social cognitive appraisals associated with uncertainty.** *Insecurity, threat, and anxiety* are three constructs which may share a great deal of conceptual and experiential overlap with uncertainty, yet remain conceptually distinct from it. First it is important to note that each of these terms is unavoidably negative in connotation. The word *insecurity* has a long history in psychology, and tends to hold a personal connotation regarding expected relations between the self and others. In the attachment theory literature, insecure attachment styles tend to result from inconsistent caregiving behaviors, and may ultimately induce self-directed uncertainty and associated negative traits, such as low self-esteem (Bowlby 1969; 1973). Thus, insecurity appears to be both self-directed (e.g. personal), negative, and associated with uncertainties. Van den Bos (2009b) additionally asserts that insecurity has a more "chronic connotation" and that, "In a new social

context, most people would feel uncertain about what to do, but those with strong self-security would probably be thinking they could learn what was needed and then be fine, whereas those with low levels of self-security might think that others were looking down on them.” Insecurity is more emotional compared to personal uncertainty (and therefore also global uncertainty) (Sverke & Hellgren, 2002). An insecure person might be described as harboring doubts about their skills and abilities (Murray, Holmes, & Collins, 2006). Like insecurity, *threat*, is also connotatively negative, and often accompanies the experience of uncertainty (Jost et al 2003a; Van den Bos, 2009a, 2009b).

*Threat* tends to be construed as a situational appraisal while insecurity tends to be construed as a personality level appraisal, though some individuals may be chronically threatened, just as insecurity may be situation-specific. Threat is likely to elicit safety seeking behavior. Indeed, need for safety is activated by threat appraisals (Sloan, & Telch, 2002). Some programs of uncertainty management research focus on “personal uncertainty,” in which threat is more directly implicated (relative to global uncertainty; Van den Bos, 2009). *Anxiety* is an affective state which many theorists implicate as related to, insecurity, threat, and uncertainty (Anson et al. 2009, Jost et al. 2003a). Uncertainty may elicit threat appraisals, which cause anxiety.

Anxiety is a negatively valenced emotional state which includes fear, apprehension, and worry (Rosen & Schulkin 1998). Anxiety can be described as exhibiting cognitive, emotional, behavioral and physiological components. Anxiety is closely related to threat, as diffuse elements of danger tend to be present in the experience of anxiety (Seligman, Walker, & Rosenhan, 2001). Developmental psychology research

also indicates that anxiety disorders are related to a sense of control (Barlow, 2000).

Freud (1936) recognized anxiety as a threatening "signal of danger" which causes individuals to engage in defense mechanisms. See Table 1 for a chart of key distinguishing features among the concepts described above.

Table 1. Uncertainty and Related Constructs

Related constructs <sup>a</sup>	Distinguishing points
Unpredictability	<p>Relatively proximal to global uncertainty</p> <ul style="list-style-type: none"> <li>▪ Unpredictability may be looked at as a component or subset within the broader construct of uncertainty.</li> <li>▪ It is the future/outcome oriented aspect of uncertainty.</li> </ul>
Uncontrollability	<ul style="list-style-type: none"> <li>▪ Uncontrollability may be looked at as a component or subset within the broader construct of unpredictability.</li> <li>▪ There are cases when one can accurately predict, but not control an outcome.</li> </ul>
Threat	<p>Relatively more distal to global uncertainty</p> <ul style="list-style-type: none"> <li>▪ Situational connotation.</li> <li>▪ Acutely experienced.</li> <li>▪ Relatively intense and stimulus specific.</li> </ul>
Insecurity	<ul style="list-style-type: none"> <li>▪ Self-emotional connotation.</li> <li>▪ Often analyzed at the personality-level.</li> <li>▪ A cognitive-emotional evaluation of a feeling state.</li> <li>▪ This includes components of "uncertainty or anxiety about oneself; lack of confidence" (Merriam-Webster, 2015).</li> <li>▪ Insecurity implies feelings of being "not protected," "nervous and uncomfortable." (Oxford Dictionaries, 2015)</li> </ul>
Mortality salience/Death thought accessibility	<ul style="list-style-type: none"> <li>▪ Stimulus specific towards thoughts about death.</li> <li>▪ Narrower (more local as opposed to global) theoretical breadth compared to Uncertainty Management literature.</li> </ul>
Anxiety	<ul style="list-style-type: none"> <li>▪ Primarily thought of as an affective state, yet exhibits all of cognitive, emotional, behavioral and physiological components.</li> <li>▪ Anxiety correlates with a breadth of negative affective states, including of fear, apprehension, and worry.</li> <li>▪ Exhibits a range of presentations from acute to diffuse; across varying situations, times, and persons.</li> </ul>

<sup>a</sup> We shall not attempt to demonstrate that uncertainty influences outcomes independent of these constructs.



**Uncertainty and mortality salience.** Due to Uncertainty Management and Terror Management perspectives' shared theoretical territory (namely, their relation to the above constructs, as well Meaning Maintenance and System Justification perspectives), some scholarship has taken a look at the relation between the constructs of uncertainty and mortality salience (Van den Bos 2004, Van den Bos, 2009a, Anson et al. 2009). Both camps would be in agreement that uncertainty is to be considered a broader and more inclusive construct than the narrower construct of mortality salience. Terror Management theorists suggest that a key consequence of uncertainty salience is the activation of death related thought (Anson et al., 2009). Conversely, Uncertainty Management theorists suggest that a key consequence of mortality salience is the activation of uncertainty related thoughts (Van den Bos 2004; Van den Bos & Lind, 2002).

Both death thoughts and uncertainty salience are tied to each of the related constructs discussed in the previous section, in extremely similar ways. From an Uncertainty Management perspective, primes of mortality salience can be viewed as a kind of indirect manipulation of uncertainty, which is believed to be the more central psychological construct of the two in respect to dependent phenomena of their mutual interest. Van den Bos (2004) reasoned that if this were the case, then it naturally would follow that compared to a mortality salience manipulation, an uncertainty salience manipulation should more directly affect the dependent variable of mutual interest, in this case "cultural worldviews."

Indeed, when comparing the effects of an uncertainty salience versus mortality salience manipulation upon an identical dependent variable assessing cultural

worldviews, using identical methods and procedure, uncertainty salience tends to produce the strongest effects (Van den Bos 2004; Van den Bos et al. 2005, Van den Bos 2004). Such research provides empirical support for the claim that the relatively “local” psychological processes implicated in terror management theory are superseded or engulfed by more global ones (i.e. uncertainty management). Van den Bos (2004) make important note that, “I hasten to note that, in my opinion, all this should not necessarily be taken as a refutation of terror management theory, but, rather, an attempt to incorporate at least some elements of it into a broader framework.”

Van den Bos (2004) further states,

I would like to stress that I am not saying here that the research findings that were reviewed in this chapter imply that uncertainty concerns underlie all terror management effects. In all likelihood, I would predict that future research will show that nonexistence does have a motivational force, over and beyond the uncertainty aspects that may be related to reminders of mortality, and I am therefore not arguing that fear of termination of life, nonexistence, and decay are just side effects of uncertainty with no motivational properties. There are no data that speak to this latter position, and personally I think that it would be unreasonable to expect that in the future there will be data that will show this. (p. 178)

Some elements of terror management theory may be part of a broader theoretical framework related to uncertainty management, while other elements of the theory are uniquely associated with the psychology of death. Both terror management and uncertainty management perspectives address issues related to the veneration of cultural worldviews, system justification, and a host of related constructs (such as those discussed in the previous sections). These similar elements may therefore harbor shared implications regarding their effects upon status quo preference. Both conceptually and

empirically, it appears that the uncertainty management framework may be better suited to describe the present phenomena of interest.

### **General Conclusions**

The diverse array of theoretical perspectives and empirical evidence reviewed above appears to advance a theoretical position which asserts that humans harbor a deep seated need to manage uncertainty. Uncertainty management models assert that since uncertainty tends to accompany negative experiential cognitive and affective states, it must be psychologically reduced. From a symbolic perspective, “uncertainty” represents the unknown or other, and is associated with negative qualities. Conversely, certainty represents the known or similar, and is associated with positive qualities. According to uncertainty management models, individuals are motivated to invoke a variety of social and cognitive mechanisms in order to reduce feelings of uncertainty.

# CHAPTER THREE

## OVERVIEW OF THEORY, HYPOTHESES, AND METHODOLOGICAL STRATEGY

### **Theoretical Assertions and Goals**

I hypothesize that psychological support for the status quo is a direct and potent mechanism of subjective uncertainty reduction. Reality (that which exists, the status quo) is psychologically connected with “the known” in contrast to its alternative, which is connected with “the unknown.” Knowledge and meaning can be derived from that which is known or certain; while these qualities cannot be derived from that which is unknown or uncertain. Thus, a challenge to one’s sense of certainty is poised to result in an increased preference for the status quo, in the service of motivated uncertainty reduction.

In its most skeletal form, my theoretical framework posits the following premises. 1) Humans fundamentally seek the affirmation of expected relations (meaning) in the social and material world, rooted in an innate desire to know the world (epistemic motivation) and the self’s relation to it (existential motivation). 2) *Uncertainty* is antithetical to this goal. 3) The experience of heightened uncertainty, therefore, produces a psychological response which motivates the individual to reduce it by affirming meaning (expected relations) by available psychological means. Extending from a conceptual synthesis of these premises, I uniquely posit that 4) in the face of uncertainty,

individuals experience a heightened desire to affirm the *status quo* (that which signifies tangible reality, without which meaning would be impossible to conceive).

Herein, I adopt a theoretical perspective which proposes that the need to maintain certainty compels people to cling to ideologies and worldviews which bolster the known and certain; the binding thread of which is best captured by the term *status quo*. I should also note that due to variation in terminology over time, some theorists (Fromm 1949; 1994) might prefer to use the term *existential* in describing this uncertainty, while more recent scholarship speaks of nearly identical principles in terms of *epistemic* certainty (Hogg & Blaylock, 2012). Regardless, most if not all parties engaged in this line of inquiry would agree that epistemic and existential certainty shine from the same source and/or represent different approaches toward understanding the same root phenomena of humankind's search for knowledge and meaning in the social world. I do not set out to empirically distinguish between epistemic vs. existential uncertainty in the present research project, in part due to the idiosyncratic nature of how these terms relate to one another in the lexicon of social psychology, though this issue may attract further investigation by interested parties.

### **Distinction Between Present Approach and Previous Work**

I intend to establish a direct cause-effect relationship between uncertainty management needs and status quo preference by empirically demonstrating that experimental manipulations of uncertainty foster heightened endorsements of the status quo, as manifested by several measures.

A variety of studies suggest that “epistemic” and “existential” needs compel people toward system justifying policies and movements, yet this line of research is correlational, not experimental (Hennes et al. 2012). Moreover, existing research demonstrates that challenging one’s cultural worldviews causally relates to status quo preference (Jost, Chaikalis-Petritsis, Abrams, Sidanius, van der Toorn, & Bratt, 2012; for a review, see Jost & Napier, 2012), yet the focus of these studies is unrelated to either uncertainty management or mortality salience.

The empirical research reviewed in the previous chapters strongly suggests a link between psychological uncertainty and conservative (or “system justifying”) values, of which preference for the status quo can be considered a central component (Jost et al. 2003). Notably however, the (Jost et al. 2003) review made its case almost entirely based upon correlational evidence. Additionally, there exists research demonstrating that mortality salience and uncertainty salience each independently affect attitudes toward cherished cultural norms and values, though the authors fail to mention any tie ins to the concept of status quo preference (For a review, see Van den Bos, 2004). Moreover, the theoretical implications of these studies are hotly contested; even over a decade after the inception of theoretical claims within the field regarding the conceptualization of, and interrelation between, the constructs of uncertainty, mortality salience, and cultural worldviews.

There are a variety of explanations for why this might be the case. As argued by Jost et al. (2004), various conceptual perspectives regarding both the constructs and formulation of the specific research questions of interest make it “Extremely difficult to

empirically distinguish between proximal fears that are related versus unrelated to the fear of death,” (p. 268) in relation to political ideology and cultural worldviews. The “extreme difficulty” of this task is debatable, but may require methods other than those used by Jost and colleagues, such as utilizing true experiments, comparing side by side manipulations of the focal constructs, or controlling for the effects of the purportedly lesser variable, to name a few possible strategies. Various theorists conceptualize and define these constructs differently, often opting for the conceptual definition and overarching theoretical perspective which aligns most harmoniously with their own body of empirical findings. Unfortunately, when a large majority of evidence in favor of a theory is offered by the researchers who conceptualized it, it is difficult to divorce this self-interested aspect of one’s perspective when careers and scientific legacies are on the line. Thus, outsider perspectives proffered by researchers who don’t have a personal stake in the outcome of these debates stand to contribute greatly to the understanding of such concepts, which are rather wide in breadth and difficult to pin down with succinct conceptual definitions fully accepted by all interested parties.

In the process of synthesizing such empirical and theoretical observations, questions naturally arise pertaining to 1) the specification of the fundamental construct(s) underlying the need to seek meaning and 2) how the quest to seek meaning tangibly affects social judgments of real consequence. To address the former question, I have suggested that *uncertainty* plays a central role in motivating individuals to seek meaning. To address the latter question, I have suggested that the *status quo*, which connotes the known and certain, is a direct conduit by which individuals move away from uncertainty

and towards certainty. Insofar as the status quo is a particularly direct mode of uncertainty reduction, it is no coincidence then that evaluations of the status quo are both deeply affected by uncertainty and also are of weighty societal consequence. In order to demonstrate such a theoretical proposition, the primary task is to empirically demonstrate a cause-effect relationship between *experimentally manipulated* uncertainty (and mortality salience) and various indices of status quo preference (a methodology which to my knowledge no researcher has yet attempted).

The prior scholarship reviewed strongly implies such a relationship, linking uncertainty to the status quo by degrees of separation with respect to related constructs. Yet, a *direct* conceptual tie between the two constructs lacks to be established empirically, despite the recognition of this connection enjoying a rich theoretical history in the philosophical tradition of existentialism, corroborated by contemporary empirical evidence consistent with its premises. Therefore, a direct causal link begs to be established with regards to thoughts about uncertainty and status quo preference.

I discussed earlier how Van den Bos and colleagues applied their broader, more global theoretical perspective to synthesize and interpret previous empirical research conducted in the name of terror management theory. They posited that uncertainty, being the more central construct, would outpace mortality salience with respect to the predicted effect shared by both theories. This is because mortality salience, they hypothesized, was to some extent an indirect prime of uncertainty. Van den Bos and colleagues posited uncertainty itself (and not specifically death uncertainty) to be the core construct of interest with regards to meaning maintenance via the endorsement of cultural



worldviews. In this way, their theoretical framework offered itself as broader in application and more direct in effects produced when compared to terror management theory. Van den Bos and colleagues suggest that some evidence offered in support terror management theory can also be construed as *indirect* evidence of uncertainty management perspectives. An experiment was then concocted in order to establish a case for direct causal evidence in support of their account. Analogously, the heretofore reviewed evidence which we interpret to be in support of our uncertainty account of status quo preference is at present only indirect evidence of its existence. A direct causal demonstration remains to be empirically established.

Specifically, in relation to the extant studies, there are currently no known studies in which both uncertainty and mortality salience are manipulated experimentally, with dependent variables addressing the construct of status quo preference. This sets the current experiments apart from previous studies which: a) do not employ experimental manipulations b) investigate the relation between mortality salience and death with no reference to status quo preference and c) investigate status quo preference without reference to one of the variables (mortality salience or uncertainty). Our most fundamental theoretical claim is that heightened uncertainty salience causes an increase in preference for the status quo, and that such an effect is not due solely to other psychological constructs potentially activated by uncertainty salience manipulations, such as mortality salience, but also feelings such as insecurity, threat, and anxiety potentially triggered by these constructs.

### **Hypothesis 1: Uncertainty Engenders Preference for Status Quo**

Hypothesis 1 (H1) states that heightened uncertainty salience (situationally manipulated) causes an increase in preference for the *status quo*, broadly construed. While a variety of heretofore reviewed empirical evidence can be interpreted as consistent with this general hypothesis, this core proposition awaits to be directly empirically tested in the context of the theoretical perspective expounded upon herein, with status quo preference as the outcome variable. This model uniquely proposes that motivated status quo preference is directly tied to psychologically deep-seated uncertainty management drives, such that manipulating uncertainty salience should result in heightened status quo preference.

### **Hypothesis 2: Multiplicative Dispositional Hypotheses**

Hypothesis 2 (H2) further posits that various moderating factors, including generalized individual differences in general appraisals of uncertainty, system justifying attitudes and worldviews, and non-ideological sociopolitical indicators will magnify the core effects as predicted by hypothesis 1. That is to say, I hypothesize that high levels of chronic uncertainty will increase participant sensitivity to the experimental manipulation, *magnifying* the size of the predicted effect of the uncertainty manipulation (H1).

However, it is alternately possible that individuals possessing high levels of chronic uncertainty may be relatively *less* affected by the experimental manipulation as specified by H1, if such individuals' uncertainty already resides at a near-ceiling level. Herein lie two complementary sets of hypotheses regarding the size and direction of the effects of H1, when entering moderators into the equation. The former hypothesis (H2) is

that which is expected, while the latter (H2's) subordinate hypothesis may provide a fruitful explanation if evidence for H2 is not garnered.

**Hypothesis 2(x).** The three sets of Hypotheses 2(x, y, z) are essentially analogous in structure, with each (x, y, z) indicating the different conceptual categories of the moderators (appraisals of uncertainty, system justifying attitudes and worldviews, and non-ideological sociopolitical indicators respectively). Thus, nested within H2 is H2(x), which specifically posits that individual differences in generalized *appraisals of uncertainty* will magnify the core effects predicted by H1. Stated otherwise, H2(x) predicts that individuals for whom uncertainty and closely related concepts are chronically accessible and/or highly negative, the effects of situationally induced uncertainty upon status quo preference will be magnified.

I have presently chosen two crucial, well established measures to assess different aspects of this larger construct (*uncertainty appraisals*). The first is the Intolerance of Uncertainty Scale (IUS), which measures a generalized intolerance or aversion toward uncertainty (Buhr, & Dugas, 2002). The IUS exhibits a four-factor structure representing the degree to which uncertainty is stressful and upsetting, uncertainty leads to the inability to act, uncertain events are negative and should be avoided, and uncertainty is associated with unfairness. Sample items include: "Uncertainty makes me uneasy, anxious, or stressed." and "It's unfair having no guarantees in life." Second is the highly similar Intolerance of Ambiguity Scale (IAS), which was designed to assess self-report attitudes toward ambiguity, defining "ambiguous" situations as those which cannot be "adequately structured or categorized due to of insufficient cues" (Budner, 1962). Sample

items include, “An expert who doesn't come up with a definite answer probably doesn't know too much.” and “People who insist upon a yes or no answer just don't know how complicated things really are.”

**Hypothesis 2(y).** Analogously, nested within H2 is H2(y), which specifically suggests that *system justifying attitudes and worldviews* will magnify the core effects predicted by H1. It is this hypothesis which underlies the theoretical core of this dissertation. I have presently chosen six measures to assess different aspects of this larger construct. First is a basic measure of left-right political ideology. Next is the American System Justification Scale (SJS) (Kay & Jost, 2003). The SJS was designed to indicate "perceptions of the fairness, legitimacy, and justifiability of the prevailing social system" (Kay & Jost, 2003, p. 828). Sample items include: “In general, the American political system operates as it should.” and “American society needs to be radically restructured. Additionally, Social Dominance Orientation (SDO) was measured with the SDO-6 scale, which includes items such as: “It would be good if groups could be equal.” (reverse coded) and “It’s probably a good thing that certain groups are at the top and other groups are at the bottom.” Additionally, I include the most recent version of the Belief in a Just World (BJW) scale, which is intended to measure the extent to which individuals believe in a just world (i.e. a world where people get what they deserve, a fair and just world; Lucas, Zhdanova, & Alexander, 2011). This scale contains items such as: “I feel that other people generally earn the rewards and punishments they get in this world.” “Other people usually use fair procedures in dealing with others.” “I generally deserve the things

I am accorded.” and “I feel that people generally use methods that are fair in their evaluation of me.”

**Hypothesis 2(z).** Analogously, nested within H2 is H2(z), which specifically suggests that *non-ideological sociopolitical factors* will moderate the core effects predicted by H1. This set of hypotheses is primarily exploratory in nature, and this variable grouping consists of items such as political participation and attention to politics. Each of these measures has been previously validated, and each scale mentioned consists of only one or two items. Thus, though this list sounds time consuming, this section consists of no more than 13 items, the typical length of a single scale.

The “interactive” approaches heretofore described under the heading “Multiplicative Dispositional Hypotheses” posit that individual differences with regards to a variety of thematically connected psychological construct groupings interact with situational primes of uncertainty in a non-additive, but rather multiplicative manner. For example, individuals high in *aversion toward uncertainty* are hypothesized to be more “reactive” to situational conditions priming uncertainty, thus magnifying their pre-existing attitudes and proclivities.

Summarizing the above, we hypothesize that the effects described in *Hypothesis 1* will be strongest among those for whom uncertainty and ambiguity are particularly distressing, since these individuals are expected to possess a greater innate need to engage in palliative, uncertainty reducing cognitive processes (i.e. those resulting in greater status quo preference) [H2(x)]. Analogously, adherence to system justifying worldviews is hypothesized to magnify the effects of primed uncertainty upon status quo

preference  $H2(y)$ ; our primary variable grouping of interest. Similarly, we hypothesize that non-ideological socio political indicators, may moderate the relation between the primes and dependent variables in an analogous fashion, though predictions in this variable grouping [ $H2(z)$ ] are primarily exploratory, lacking previous theoretical establishment. The basic prediction here is that individuals who feel more politically involved (high attention, interest, et cetera) should exhibit a magnification/polarization of attitudes since they have the largest personal stake/self-identification with the content area at hand.

### **Hypothesis 3: Additive Dispositional Hypotheses**

Alternatively, whereas the hypotheses outlined above presume an interaction of the dispositional variables with the situationally manipulated independent variable (uncertainty and mortality salience primes), Hypotheses 3(x), 3(y), and 3(z) predict that the effects of the dispositional variables will combine *additively* (but not multiplicatively) with the effect of the prime to produce status quo preference). While the “additive” vs. “multiplicative” distinction may seem tedious, it is specified here in order to thoroughly characterize the structure of the underlying process mechanisms generating the effects of interest. I gauge the underlying mechanisms as being more consistent with a multiplicative structure as described in the previous section, though the possibility of a merely additive model may also be noted. In other words, the additive hypotheses are not specifically predicted, but serve as a counterpoint to the multiplicative hypotheses outlined above.

H3 and subsequent nested hypotheses are directionally consistent with the H2 hypotheses stated above, yet predict only simple effects of the situational and dispositional IV's, without significant interaction effects (in the context of a hierarchical linear regression data analysis approach, significance at Step1[main effects], but not Step 2[interactive/multiplicative effects]). If the additive (non-interactive) perspective is correct, each of these simple effects (corresponding to the variables in the three families of dispositional effects [the moderator variables], and the uncertainty prime) would exert themselves independently of one another. Thus, the moderator would not magnify/polarize attitudinal differences resulting from the prime, but rather contribute in an additive manner with the influence of the primes in predicting the dependent variables.

**Hypothesis 3(x).** Nested within H3 is H3(x), which specifically posits that individual differences in generalized *appraisals of uncertainty* will be directly correlated with status quo preference, while not affecting the magnitude of any effects produced by the uncertainty prime.

**Hypothesis 3(y).** Nested within H3 is H3(y), which specifically posits that individual differences in *system justifying attitudes and worldviews* will be directly correlated with status quo preference, while not affecting the magnitude of any effects produced by the uncertainty prime.

**Hypothesis 3(z).** Nested within H3 is H3(z), which specifically posits that individual differences in *sociopolitical indicators* will be directly correlated with status quo preference, while not affecting the magnitude of any effects produced by the uncertainty prime.

### **Control and Mediating Variables**

All previously mentioned predictions will first be tested for the raw effect, without entering control variables or testing for mediation. Second, these hypotheses will be tested controlling for the four “Thoughts and Feelings Measures” (see Appendix) in the regression model. Note that “controls” refers to these measures, while “control condition” refers to participants randomly assigned to the control prime. These four measures entail asking the participants the degree to which they thought about or felt: “death and dying,” “anxious,” “insecure,” and “threatened.” Lastly, each of the moderational regression models was tested for mediated moderation criteria with the “thoughts and feelings measures.” Since it is not possible to test for mediated moderation when the same variable serves both as a control and a mediator, the mediational tests of moderation were performed without controls.

The initial reason for including the “thoughts and feelings measures” was for them to be looked at as control variables, with the mediational tests largely being an afterthought. We expect the “with controls” analyses to demonstrate that any effects of uncertainty on status quo preference remain significant even after controlling for these measures. Additionally, replicating prior research, the Positive Affect Negative Affect Scale (PANAS) will be measured “to find out whether unintended effects of the salience manipulation on the positive and negative subsets are found.” (Van den Bos et al. 2005, p. 96). The inclusion of this scale following the prime can also be said to operate as both a time delay, and possible filler task.



## Hypotheses Overview

### Core hypotheses.

- H1. Uncertainty/Mortality Salience (situationally manipulated) → Status Quo Preference
- H2. Multiplicative Dispositional Hypotheses. Moderating factors expected to magnify the effect specified by H1.

### Interactive hypotheses.

- H2x. Uncertainty Salience \* Generalized appraisals of uncertainty → Status Quo Preference
- H2y. Uncertainty Salience \* System justifying attitudes and worldviews → Status Quo Preference
- H2z. Uncertainty Salience \* (non- ideological) sociopolitical indicators → Status Quo Preference

### Additive dispositional hypotheses.

- H3x. Uncertainty Salience + Generalized appraisals of uncertainty → Status Quo Preference
- H3y. Uncertainty Salience + System justifying attitudes and worldviews → Status Quo Preference
- H3z. Uncertainty Salience + (non- ideological) sociopolitical indicators → Status Quo Preference

Following from these hypotheses, I shall perform two experiments. Experiment 1 will employ a manipulation with three conditions: uncertainty salience, mortality

salience, and control group salience (essentially identical to the setup employed by Van den Bos et al., 2005, utilizing the Life Event Inventory (LEI) method (see Appendix). The moderating variables previously discussed will be additionally included, along with the controls and tests of mediation to be described. After Experiment 1, a pilot test will be performed to field different methods of priming the experimentally manipulated mental states in a manner different from the LEI. Experiment 2 will then utilize this different method of uncertainty, mortality salience, and control induction, testing the same hypotheses as Experiment 1; a near replication with variation in the independent variable priming method.

## **CHAPTER FOUR**

### **EXPERIMENT 1**

Experiment 1 was primarily conceived to test core hypothesis (H1) and variations, which state that uncertainty (situationally manipulated) triggers heightened levels of status quo preference. This hypothesis remains to be conceived and tested as such. Furthermore, the moderational/interactive hypotheses will demonstrate the degree to which individual difference variables related to the three moderator variable groupings of uncertainty appraisals (H2x), system justifying attitudes and worldviews (H2y) and other non-ideological social and political variables (H2z) influence any relation between our prime and the dependent variables, representing various facets of status quo preference. Such research questions and their methodological operationalization as described herein build upon the previous studies cited, yet are in themselves novel and a logical step forward in the investigation of such issues, allowing for new insights into established theoretical perspectives such as the Uncertainty Management and System Justification theories.

#### **Design**

This experiment included one manipulated categorical independent variable with three between subject levels (uncertainty salience, mortality salience, control), a battery of the thirteen continuous moderators to be fielded as second independent variable in successive models, and a hybrid measure of “thoughts and feelings” pertaining to threat,

insecurity, death, and anxiety serving as controls in the appropriate “with controls” models (see Appendix for these measures as they appear). The dependent variable consisted of three distinct assessments of *status quo preference* as gauged via three scales triangulating the construct; including Status Quo Preference Scale (higher values indicating higher preference), Attitudes Towards Reformers (higher values indicating more negative attitudes) and Support for Regime Change (higher values indicating more support).

**Independent variable manipulation.** In the first experiment, I manipulated *uncertainty* in a manner operationally identical to that of the uncertainty salience priming procedure introduced by Van den Bos (2001), based on prior uncertainty management studies (For a review, see Van den Bos, 2005, 2009). According to this procedure, participants are asked the following: a) “Please briefly describe the emotions that the thought of being uncertain arouses in you” and (b) “Please write down, as specifically as you can, what you think physically will happen to you as you feel uncertain.” This manipulation has been extensively utilized within the uncertainty management literature and has firmly demonstrated itself to be a valid and effectual method for inducing state uncertainty. In addition to the uncertainty condition, I manipulated mortality salience in the same manner as Van den Bos et al. (2005), who was the first to compare the effects of manipulations of uncertainty salience and mortality salience side by side.

The uncertainty manipulation introduced by Van den Bos (2001) was structurally based upon the mortality salience prime most commonly found in the terror management literature (Greenberg et al. 1997). The original terror management manipulation asked

participants the following: (a) “Please briefly describe the emotions that the thought of your death arouses in you” and (b) “Please write down, as specifically as you can, what you think physically will happen to you as you die.” The Van den Bos et al. (2001) uncertainty manipulation simply reads “(a) Please briefly describe the emotions that the thought of your being uncertain arouses in you. (b) Please write down, as specifically as you can, what you think physically will happen to you as you feel uncertain. The control condition reads (a) “Please briefly describe the emotions that the thought of your watching TV arouses in you. (b) Please write down, as specifically as you can, what you think physically will happen to you as you watch TV.”

This mortality salience manipulation pairs well with the uncertainty manipulation, as explained by van Den Bos et al. (2005),

By thus replacing “death” with “uncertain” in the most commonly used manipulation of terror management theory, while leaving everything else the same, the uncertainty salience manipulation was constructed in such a way that it very closely resembled the mortality salience manipulation. As a result, the impact of these two manipulations on people's reactions toward transgressions and affirmation of important cultural norms and values could be investigated in a way that yielded a very clean and hence meaningful comparison between the two manipulations.

**Dependent measures.** I employed three dependent variables indexing important aspects of status quo preference. First employed is the Status Quo Preference Scale, originally developed by myself for use in a separate line of research. It has subsequently been modified, with a reduction in the number of items from its original 16 down to 9 items. This was done by running a reliability analysis (Cronbach, 1951) on the original 16 items, and removing the item which, if removed, would result in the greatest increase in the overall alpha coefficient of the scale. This procedure was recursively applied one item

at a time until the scale's alpha coefficient rose above the .70 level, generally recognized as "good" reliability. The resulting status quo preference scale contains 9 items with Cronbach's alpha = .736. Sample items in this scale include: "Change is in life is necessary for success." and "Change in life usually comes with great costs" (see Appendix for the scale as it appears).

The second dependent measure, Attitudes Towards Reformers is included, as O'Brien and Crandall (2005) make the case that that negatively judging social actors who engage in reform represents a key component in the social cognition of status quo preference. This scale contains six short items, including "Those who protest the political system are usually looking for handouts and unrealistic quick fixes." and "Those who attempt to reform the system usually have ulterior motives." The third and final dependent measure, Support for Regime Change, contains six items gauging agreement with a variety of statements regarding attitudes towards Regime Change. Sample items include "I like to see government change their leaders often, rather than rarely." and "When the political rulers of a country become ineffective, they should be removed swiftly." These three scales, including the 9 item status quo preference scale, the 6 item attitudes towards reformers scale, and the 6 item support for regime change scale, compose the entirety of the dependent variable battery.

**Positive and Negative Affect Scale.** As in Van den Bos et al. (2005), the Positive Affect Negative Affect Scale (PANAS) (Watson, Clark, & Tellegen, 1988), were measured "to find out whether unintended effects of the salience manipulation on the positive and negative subsets are found" (p. 96). This scale is composed of two 10-item

subscales addressing the factors of positive and negative affect. As demonstrated by prior researchers utilizing this same procedure (e.g. Jost, J. T., Chaikalis-Petritsis, V., Abrams, D., Sidanius, J., Toorn, J. van der, & Bratt, C. ,2012; Van den Bos et al., 2006), we hypothesized that the uncertainty manipulation will have no effect upon either subscale of the PANAS. Thus, in accordance with precedent set by prior research, we predicted that this manipulation check would demonstrate that mere positive or negative affect cannot be held responsible for any effects of the prime upon the dependent measures. This allows us to assert that the experimental manipulation exerts its effects upon the dependent variables as a result of uncertainty's proposed psychological functions as outlined in this dissertation, and not simply by uncertainty changing global positive or negative affective.

#### **Manipulation check, control, and potential mediating variables.**

Subsequently, the three manipulation check items were administered, in which participants were asked the extent to which they thought about: uncertainty, death, or television (the control topic). These three questions served as the manipulation check questions, as they reflect thoughts corresponding to the three randomly assigned experimental conditions (see Appendix). Next, the four "thoughts and feelings measures" were assessed, asking participants the extent to which: "I thought about or felt death and dying," "I thought about or felt anxious." "I thought about or felt insecure." and "I thought about or felt threatened." These four variables serve as the control variables for the "with controls" regression models; and alternatively serve as potential mediators in the mediational models.

**Measures of moderating variables.** The moderators introduced previously appear here. These variables tend to cluster into the three conceptual categories, “uncertainty appraisals,” “system justifying attitudes and worldviews” and “non-ideological sociopolitical indicators.”

**Individual difference measures.**

***Uncertainty appraisals.***

- M1. UIS (Uncertainty Intolerance Scale)
- M2. IAS (Intolerance of Ambiguity Scale)

***System justifying attitudes and worldviews.***

- M3. (SJS) System Justification Scale
- M4. SDO (Social Dominance Orientation)
- M5. Belief in a Just World Scale
- M6. Political Ideology (liberal vs. conservative)
- M7. Partisanship (Party Identification)

***Sociopolitical indicators (non-ideological).*** (Note: Each of the following are 1 or 2 item measures).

- M8. Trust in Government
- M9. Political Self-Efficacy
- M10. Political Interest
- M11. Political Attention
- M12. Knowledge
- M13. Voting intention



## Participants and Procedure

Participants were accessed and recruited via Mechanical Turk (MTurk), an online research recruitment tool which offers quick access to a representative, non-university sample. 194 American individuals participated in the study arranged through Amazon Mechanical Turk. Participants were informed that they will be asked to perform tasks such as writing about personal experiences, in addition to reporting a variety of their own opinions and attitudes. Experimental materials were administered on participants' home computers, using a securely encrypted third party service for data acquisition and storage accessible only to the primary investigator. Participants were randomly assigned to one of three conditions (uncertainty, mortality salience, control). The survey questionnaires were presented in the following order: Random assignment to IV condition, PANAS, DVs, manipulation checks, controls and mediators, potential moderating variables.

## Experiment 1 Results

**Manipulation check.** There was a statistically significant mean difference in the uncertainty salience manipulation check item self-report ratings (see Appendix) between the three randomly assigned, experimentally manipulated independent variable conditions, ( $F(2, 190) = 40.914, p < .001, \eta^2 = .301$ ). Post-hoc comparisons using Tukey's HSD indicated that the mean rating (with higher numbers indicating higher levels of uncertainty) in the uncertainty condition ( $M = 5.773, SD = 1.796$ ) was significantly greater than the mean rating for both the mortality salience condition ( $M = 4.419, SD = 2.177; p < .001$ ), and the control topic salience condition ( $M = 2.692, SD = 1.879; p < .001$ ). The mortality salience condition was significantly greater than the

control topic salience condition on uncertainty salience manipulation check ratings ( $p < .001$ ). Thus, the uncertainty prime produced more uncertainty salience than the control and mortality salience conditions. The mortality salience condition produced greater uncertainty compared to the control condition, but not as much as in the uncertainty condition. For differences between groups, see the items “Uncertainty salience check,” “Control topic salience check,” and “Mortality salience check” in Tables 2 and 3.

There emerged a statistically significant mean difference in the control topic salience check ratings between the three manipulated independent variable conditions,  $F(2,190) = 100.417, p < .001, \eta^2 = .514$ . Post-hoc comparisons using the Tukey HSD test indicated that the mean rating for the uncertainty condition ( $M = 2.015, SD = 1.650$ ) was significantly less than the mean rating for the control topic salience condition ( $M = 6.031, SD = 1.667; p < .001$ ). The mortality salience condition mean rating ( $M = 2.194, SD = 2.126$ ) was also significantly less than the control topic condition on control topic salience/manipulation check ratings ( $p < .001$ ). Thus, the control topic (television) prime produced more salience for that particular topic, but not the others.

Table 2. ANOVA of Manipulation Check and Thoughts/Feelings Variables by Condition, Study 1

Between groups effect	Uncertainty		Mortality salience		Control		<i>F</i>	<i>p</i>	$\eta^2$	Tukey's HSD
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Uncertainty salience check	5.773***	1.796	4.419***	2.177	2.692***	1.879	40.914	< .001	.301	2, 3 < 1; 3 < 2
Control topic salience check	2.015***	1.650	2.194***	2.126	6.031***	1.667	100.417	< .001	.514	1, 2 < 3
Mortality salience check	2.530***	2.017	6.177***	1.454	1.785***	1.452	125.351	< .001	.569	1 < 2; 1, 2 > 3
Death thoughts	2.546***	1.874	5.597***	1.531	1.769***	1.389	99.201	< .001	.511	1 < 2; 1, 2 > 3
Anxious thoughts	4.652***	1.925	4.516***	1.880	2.415***	1.731	29.849	< .001	.239	1, 2 > 3
Insecure thoughts	4.500***	1.947	4.065***	1.863	2.169***	1.606	30.445	< .001	.243	1, 2 > 3
Threat thoughts	3.364***	2.102	3.581***	1.887	1.831***	1.409	17.626	< .001	.156	1, 2 > 3
Positive affectivity	18.379	4.154	17.677	4.958	17.046	4.862	1.338	.265	.014	—
Negative affectivity	8.136	4.217	7.855	4.718	6.877	3.243	1.697	.186	.018	—

Note.  $\eta_p^2$  = partial eta squared.

<sup>+</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Table 3. Post Hoc Comparisons From Tukey's Honestly Significant Difference Test, Study 1

Dependent variable/ condition (I)	Condition (J)	Mean difference (I-J)	SE	p
Uncertainty salience check				
Uncertainty	Mortality salience	1.353***	0.345	< .001
Uncertainty	Control	3.080***	0.341	< .001
Control	Mortality	-1.727***	0.347	< .001
Control topic salience check				
Uncertainty	Mortality salience	-0.178	0.322	.845
Uncertainty	Control	-4.016***	0.318	< .001
Control	Mortality	3.837***	0.323	< .001
Mortality salience check				
Uncertainty	Mortality salience	-3.647***	0.295	< .001
Uncertainty	Control	0.746*	0.291	.030
Control	Mortality	-4.393***	0.296	< .001
Death thoughts				
Uncertainty	Mortality salience	-3.051***	0.285	< .001
Uncertainty	Control	0.776	0.282	.018
Control	Mortality	-3.828***	0.286	< .001
Anxious thoughts				
Uncertainty	Mortality salience	0.135	0.327	.910
Uncertainty	Control	2.236***	0.323	< .001
Control	Mortality	-2.101***	0.328	< .001
Insecure thoughts				
Uncertainty	Mortality salience	0.435	0.320	.364
Uncertainty	Control	2.331***	0.317	< .001
Control	Mortality	-1.895***	0.322	< .001
Threat thoughts				
Uncertainty	Mortality salience	-0.217	0.322	.779
Uncertainty	Control	1.533***	0.319	< .001
Control	Mortality	-1.750***	0.324	< .001
Uncertainty	Mortality salience	0.701	0.825	.672
Uncertainty	Control	1.333	0.815	.234
Control	Mortality	-0.631	0.828	.727
Negative affectivity				
Uncertainty	Mortality salience	0.282	0.724	.920
Uncertainty	Control	1.259	0.716	.186
Control	Mortality	-0.978	0.727	.372

<sup>+</sup>p < .10. \*p < .05. \*\*p < .01. \*\*\*p < .001.

There was a statistically significant mean difference in the mortality salience check ratings among the three manipulation conditions ( $F(2, 190) = 125.351, p < .001, \eta^2 = .569$ ). Post-hoc comparisons using Tukey's HSD test indicated that the mean rating for the uncertainty condition ( $M = 2.530, SD = 2.017$ ) was significantly less than the mean rating for the mortality salience condition ( $M = 6.177, SD = 1.454; p < .001$ ), but significantly greater than the mean rating for the control topic salience condition ( $M = 1.785, SD = 1.452; p = .030$ ). The mortality salience condition was significantly greater than the control topic salience condition in mortality salience manipulation check ratings ( $p < .001$ ).

Thus, the life event inventory (LEI) priming method did indeed produce the greatest levels of uncertainty salience in the uncertainty condition, and the greatest levels of mortality salience in the mortality salience condition. Notably, however, the mortality salience prime bolstered uncertainty salience ratings compared to control, and the uncertainty salience prime bolstered mortality salience ratings compared to control (though in each case, the non-matching rating was significantly lower than the matching condition in which it was intended to occur). Thus, this priming method partially confounds “uncertainty” with “mortality salience.” Priming uncertainty appears to cause some incidental mortality salience, and priming mortality salience appears to cause some incidental uncertainty salience.

**Preliminary analyses.** Preliminary analyses (in preparation for the regression analyses which directly test the experimental hypotheses discussed) were performed examining the relation between condition and the moderator variables. Thirteen one-way

analyses of variance (ANOVA) were performed to determine whether or not participants in the three experimentally manipulated conditions differed significantly in their scores along these variables (see Table 4). As predicted, none of these thirteen variables differed by condition. ANOVAs were also performed to determine whether or not participants in the three manipulated conditions differed significantly in their scores on the positive affect and negative affect subscales of the PANAS (see Table 3). As expected, no group differences were found on the PANAS scales.

Thought and Feeling Measures. Preliminary analyses were also performed examining the relation between condition and the “Thoughts and Feeling Measures” (Appendix). Note that these four items were administered after the three manipulation check items, and they are separate questions from the manipulation check items. The previous three manipulation check items were purely “thought content” items, while these four items are combined “thoughts/feelings” items which read as follows: “I thought about or felt death and dying.” “I thought about or felt anxious.” “I thought about or felt insecure.” and “I thought about or felt threatened.” Note that the item “I thought about or felt death and dying” is different and separate from the mortality salience manipulation check.

Table 4. ANOVA of Moderator Variables by Condition, Study 1

Between Groups Effect	Uncertainty		Mortality Salience		Control		<i>F</i>	<i>p</i>	$\eta^2$	Tukey's HSD
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Intolerance of uncertainty	36.364	9.218	36.081	9.081	34.985	8.612	0.429	.652	.004	—
Intolerance of ambiguity	-3.409	7.296	-3.113	8.658	-2.092	5.923	0.574	.564	.006	—
System justification (American)	14.788	4.951	15.016	5.029	13.569	4.448	1.680	.189	.017	—
Social dominance orientation	-19.697	18.395	-21.129	22.919	-21.569	19.002	0.154	.857	.002	—
Belief in a Just World	23.076 <sup>+</sup>	6.257	23.694 <sup>+</sup>	6.166	21.277 <sup>+</sup>	6.209	2.617	.076	.027	—
Trust in Government	4.667	1.269	4.758	1.743	4.723	1.409	0.062	.940	.001	—
Political self-efficacy	4.424	1.479	4.597	1.634	4.262	1.661	0.703	.496	.007	—
Political interest	5.561	1.314	5.661	1.546	5.508	1.416	0.189	.828	.002	—
Political attention	5.849	1.395	5.774	1.654	5.646	1.363	0.316	.730	.003	—
Political knowledge	5.485	1.350	5.532	1.617	5.246	1.311	0.740	.478	.008	—
Voting behavior	1.197	0.728	1.065	0.787	0.985	0.780	1.288	.278	.013	—
Political ideology	0.075	0.470	-0.034	0.505	-0.043	0.523	1.047	.353	.012	—
Partisanship	0.081	0.493	-0.033	0.510	-0.049	0.497	1.179	.310	.014	—

Note.  $\eta_p^2$  = partial eta squared.

<sup>+</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

There was a statistically significant mean difference in the death thoughts/feelings ratings between the three manipulated conditions ( $F(2, 190) = 99.201, p < .001, \eta^2 = .511$ ) See items “Death thoughts” “Anxious thoughts,” “Insecure thoughts” and “Threat thoughts” in Table 2. Post-hoc comparisons using Tukey’s HSD test indicated that the death thought/feelings ratings for the uncertainty condition ( $M = 2.546, SD = 1.874$ ) was significantly less than the mean rating for the mortality salience condition ( $M = 5.597, SD = 1.531; p < .001$ ), but significantly greater than the rating for the control topic salience condition ( $M = 1.769, SD = 1.389; p = .018$ ). The mortality salience condition was significantly greater than the control topic salience condition on the variable of death thoughts ( $p < .001$ ). Thus, similar to the mortality salience manipulation check item, this “death thoughts/feelings” item (a separate item), showcased highest levels in the mortality salience condition, but also was bolstered (compared to control) in the uncertainty condition. See items “Death thoughts” “Anxious thoughts,” “Insecure thoughts” and “Threat thoughts” in Table 3.

There was a statistically significant mean difference in the anxious thoughts/feelings ratings between the three manipulated/randomly assigned independent variable conditions ( $F(2, 190) = 29.849, p < .001, \eta^2 = .239$ ). Post-hoc comparisons using Tukey’s HSD indicated that the mean anxious rating for the uncertainty condition ( $M = 4.652, SD = 1.925$ ) was significantly greater than the mean rating for the control topic condition ( $M = 2.415, SD = 1.731; p < .001$ ). The mortality salience condition ( $M = 4.516, SD = 1.880$ ) was also significantly greater than the control topic condition ( $p < .001$ ) on this item. The uncertainty and mortality salience conditions did not differ on this



item ( $p > .05$ ). Thus, both uncertainty and mortality salience produced roughly equivalent levels of heightened self-reported anxiousness, compared to the control condition.

There was a statistically significant mean difference for the insecure thoughts/feelings ratings among the three manipulated conditions ( $F(2, 190) = .445, p < .001, \eta^2 = .243$ ). Post-hoc comparisons using Tukey's HSD test indicated that the mean insecure rating for the uncertainty condition ( $M = 4.500, SD = 1.947$ ) was significantly greater than the mean rating for the control topic condition ( $M = 2.169, SD = 1.606; p < .001$ ). The mortality salience condition ( $M = 4.065, SD = 1.863$ ) was also significantly greater than the control topic condition ( $p < .001$ ). The uncertainty and mortality salience conditions did not differ on this item ( $p > .05$ ). Thus, both uncertainty and mortality salience produced roughly equivalent heightened levels of insecurity compared to control.

There was a statistically significant mean difference for the threat thoughts/feelings ratings among the three manipulated conditions ( $F(2, 190) = 17.626, p < .001, \eta^2 = .156$ ). Post-hoc comparisons using Tukey's HSD test indicated that the mean rating for the uncertainty condition ( $M = 3.364, SD = 2.102$ ) was significantly greater than the mean rating for the control topic condition ( $M = 1.831, SD = 1.409; p < .001$ ). The mortality salience condition ( $M = 3.581, SD = 1.887$ ) was also significantly greater than the control topic condition ( $p < .001$ ). The uncertainty and mortality salience conditions did not differ on this item ( $p > .05$ ). Thus, both uncertainty and mortality salience produced a comparably heightened sense of threat compared to control.

In summary, these tests summarized under the “Thoughts and Feeling Measures” heading exhibit the difference in ratings on the four “thoughts/feelings” items among the three manipulated conditions. Across all four items, the uncertainty and mortality salience conditions produced heightened thoughts and feelings ratings compared to the control condition. Also, across all four items, the uncertainty and mortality salience conditions did not produce significantly different ratings from one another.

**Main analyses.** Analyses were performed to examine the relation between condition and each of the three dependent variables: status quo preference scale, attitudes towards reformers, and support for regime change. Three one-way analyses of variance (ANOVA) were performed to determine whether or not participants in the three manipulated conditions differed significantly in their scores on these three dependent variables respectively (see Table 5).

Results demonstrated that there were no between groups differences on these dependent variables. Additionally, analysis of covariance (ANCOVA) of condition predicting each of the respective dependent variables with the four thoughts/feelings measures entered as covariates was performed. In each case, the pattern of means did not differ from the equivalent model ANOVA sans covariates, all ( $p > .2$ ). Thus, Hypothesis 1 (H1) without interactions was not supported. In addition to these ANOVA and ANCOVA models, main effects of condition are tested as factors within each of the yet to be discussed regression model results, in both additive (step1) and interactive (step2) models. As the regression results shall demonstrate, no main effects of condition emerged as significant in any of the regression models, either with or without controls, all ( $p > .2$ ).

Table 5. ANOVA of Three Dependent Variables by Condition, Study 1

	Uncertainty		Mortality salience		Control					
Between groups effect	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	$\eta^2$	Tukey's HSD
Status quo preference	38.439	7.748	39.371	9.038	37.523	8.437	0.766	.466	.008	—
Attitudes towards reformers	12.410	5.749	12.629	5.692	12.369	5.369	0.039	.961	< .001	—
Support for regime change	8.273	2.704	8.419	3.443	9.123	3.059	1.420	.244	.015	—

*Note.*  $\eta^2$  = eta squared.

<sup>+</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

In these experiments, the status quo preference and support for regime change scales were coded such that higher values delineated more status quo preference and more support respectively. The attitudes towards reformers scale was coded such that higher values delineated more *negative* attitudes. Because the main effect was non-significant, it was not possible to perform analyses that investigate the mediator(s) of this non-existent effect.

### **Study 1: Two-Way Interaction Models (Moderator by Condition)**

Interaction terms were created by multiplying the variables together and entering the products as predictor variables in a hierarchical linear regression model. Each moderator was tested separately in two models, where the second model included all four control variables of (a) death thoughts, (b) anxious thoughts, (c) insecure thoughts, and (d) threat thoughts. To avoid the gratuitous reporting of nonsignificant results, only regression models with a significant or marginally significant omnibus result are decomposed.

Main effects of condition and the moderator were tested at step 1, while condition by moderator variable (Condition X Moderator) interaction terms were tested at step 2 in the regression hierarchy. Control variables were entered with the main effects in step 1 for the (“with controls” models). Linear transformations were performed on all continuous variables before running the regression analyses such that ( $M = 0$ ,  $SD = .5$ ). That is, all continuous variables were re-scaled from  $-.5$  (low on the moderator variables, one standard deviation below the mean) to  $.5$  (high on the moderator variables, one standard deviation above the mean.) Stated otherwise, for the regression analyses, scales

were transformed into a Z-score, and then divided by 2, such that the mean centered on 0 and the standard deviation equaled .5. All subsequent references to “low” and “high” levels of a continuous variable are coded as above.

Two, two-way interactions were found to be significant at the  $p < .05$  level: (a) MS X Political Ideology, and (b) US X Attention to Politics. The abbreviations “US” and “MS” are used here and throughout to refer to the Uncertainty Salience and Mortality Salience dummy coded variables. In study 1, only the dependent variable of attitudes towards reformers yielded significant regression results, with the dependent variables of status quo preference scale and support for regime change failing to yield any significant results in experiment 1.

**Political ideology interaction.** For all regression models, dummy coding was utilized to compare each of the experimental conditions (uncertainty salience, mortality salience) against the control condition. The uncertainty salience dummy coded variable (US) was scored as 1 for participants in the uncertainty condition, and 0 for participants in the other two conditions. The mortality salience dummy coded variable (MS) was scored as 1 for participants in the mortality salience condition, and 0 for participants in the other two conditions. The control/referent dummy coded variable was scored with a value of 0 for both the US and MS conditions.

**Step 1.** The (a) US and (b) MS dummy codes, in addition to all main effects (and controls where applicable) were entered along with the moderator of political ideology (abbreviated PIDEO) at step 1. Linear regression results at step 1 revealed no significant effect of: US on attitudes toward reformers versus the control dummy code ( $B = 0.048$ ,  $\beta$

= 0.045,  $SE = 0.087$ ,  $t(177) = 0.549$ ,  $p = .583$ ), without controls, ( $B = 0.062$ ,  $\beta = 0.058$ ,  $SE = 0.097$ ,  $t(173) = 0.636$ ,  $p = .526$ ), with all controls); nor for MS ( $B = 0.007$ ,  $\beta = 0.007$ ,  $SE = 0.088$ ,  $t(177) = 0.082$ ,  $p = .935$ ), without controls (see Table 6); ( $B = -0.096$ ,  $\beta = -0.089$ ,  $SE = 0.123$ ,  $t(173) = -0.783$ ,  $p = .435$ ), with all controls (see Table 7).

Table 6. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reformers Regressed Onto Condition and the Moderator of Political Ideology, Without Controls, Study 1

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	.048	.087	.045	.042	.087	.039
Mortality salience (MS)	.007	.088	.007	-.004	.088	-.004
Political ideology (PIDEO)	-.327***	.072	-.324	-.186	.118	-.184
US * PIDEO	—	—	—	-.138	.177	-.075
MS * PIDEO	—	—	—	-.308 <sup>+</sup>	.173	-.174
Constant	-.017	.061	—	-.011	.061	—
$R^2(R^2 \text{ Adj})$	.104 (.089)			.120 (.095)		
$F$ Change in $R^2$	6.834***			1.598		

Note. Referent group for Condition = Control.

<sup>+</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Step 1 revealed a significant main effect of political ideology predicting attitudes toward reformers in the model without controls ( $B = -0.327$ ,  $\beta = -0.324$ ,  $SE = 0.072$ ,  $t(177) = -4.527$ ,  $p < .001$ ), such that leftist/liberals exhibited more positive attitudes towards reformers, and right wing/conservative exhibited more negative attitudes towards them (an effect well established in prior literature). When controls were entered into the model, this effect remained significant,  $B = -0.326$ ,  $\beta = -0.322$ ,  $SE = 0.071$ ,  $t(173) = -4.591$ ,  $p < .001$ , with all controls).

**Step 2.** Each of the dummy code x moderator interaction terms were entered in step 2. Regression analyses revealed a marginally significant interaction between MS and

political ideology predicting attitudes toward reformers, without controls ( $B = -0.308$ ,  $\beta = -0.174$ ,  $SE = 0.173$ ,  $t(175) = -1.787$ ,  $p = .076$ ), which emerged as significant when all controls were entered into the model ( $B = -0.360$ ,  $\beta = -0.203$ ,  $SE = 0.169$ ,  $t(171) = -2.131$ ,  $p = .035$ ). The interaction between US and political ideology predicting attitudes towards reformers did not yield significant results without controls ( $B = -0.138$ ,  $\beta = -0.075$ ,  $SE = 0.177$ ,  $t(175) = -0.782$ ,  $p = .436$ ), or with controls ( $B = -0.156$ ,  $\beta = -0.084$ ,  $SE = 0.175$ ,  $t(171) = -0.888$ ,  $p = .376$ ). See Tables 6 and 7.

Table 7. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reformers Regressed Onto Condition, the Moderator of Political Ideology, With Controls, Study 1

Variable	Step 1			Step 2		
	$B$	$SE\ B$	$\beta$	$B$	$SE\ B$	$\beta$
Uncertainty salience (US)	.062	.097	.058	.055	.097	.052
Mortality salience (MS)	-.096	.123	-.089	-.134	.123	-.124
Political ideology (PIDEO)	-.326***	.071	-.322	-.164	.114	-.163
Death thoughts (DT)	.147	.120	.145	.185	.121	.183
Anxious thoughts (AT)	-.275*	.111	-.272	-.282*	.111	-.279
Insecure thoughts (IT)	-.006	.127	-.006	-.006	.127	-.006
Threat thoughts (TT)	.272*	.121	.266	.262*	.121	.255
US * PIDEO	—	—	—	-.156	.175	-.084
MS * PIDEO	—	—	—	-.360*	.169	-.203
Constant	.014	.071	—	.028	.071	—
$R^2(R^2\ Adj)$	.172 (.139)			.194 (.151)		
$F$ Change in $R^2$	5.150***			2.274		

Note. Referent group for Condition = Control.

\* $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Simple slopes analyses.** Without controls, simple slopes analyses revealed that for Conservatives, those primed with mortality salience exhibited more negative attitudes towards reformers, though these effects did not reach the threshold of statistical

significance ( $B = 0.150$ ,  $\beta = 0.139$ ,  $SE = 0.119$ ,  $t(175) = 1.262$ ,  $p = .209$ ). For Liberals, those primed with mortality salience exhibited more positive attitudes towards reformers, likewise falling short of statistical significance ( $B = -0.159$ ,  $\beta = -0.147$ ,  $SE = 0.128$ ,  $t(175) = -1.242$ ,  $p = .216$ ).

With controls in the model, however, significant effects did emerge. For Conservatives, the mortality salience prime had no effect. ( $B = 0.046$ ,  $\beta = 0.043$ ,  $SE = 0.139$ ,  $t(171) = 0.333$ ,  $p = .739$ ). For Liberals, however, the mortality salience prime caused an increase in favorable attitudes towards reformers ( $B = -0.314$ ,  $\beta = -0.290$ ,  $SE = 0.159$ ,  $t(171) = -1.973$ ,  $p = .05$  exactly). See Figure 1.

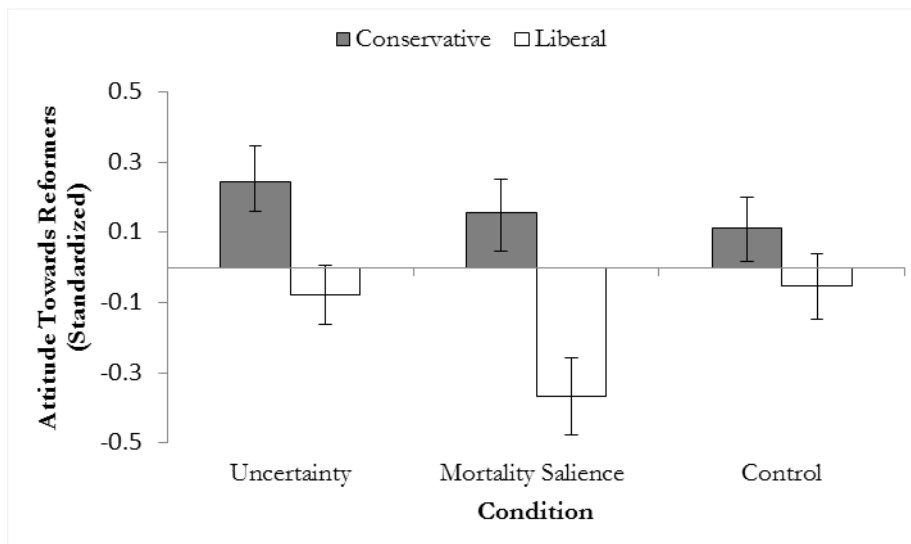


Figure 1. Estimated Marginal Means of Each Condition for the Dependent Variable of Attitudes Towards Reformers, Moderated by Political Ideology, With Controls. Error bars represent  $\pm 1$  standard error from the mean, Study 1.

**Mediated moderation.** Analyses of mediated moderation was conducted to determine if any of the thoughts/feelings measures mediate the significant two-way interaction reported here. These supplementary mediated moderation analyses are exploratory and not tied to any particular theory or a-priori hypotheses core to the



theoretical claims made herein. In other words, failure to find support for mediated moderation does not impede or affect any evaluations of the previously stated hypotheses. As will be demonstrated throughout, analyses demonstrate a complete lack of support for any mediated moderation models. Since the thoughts/feelings measures cannot simultaneously be treated as control and mediator in the same model, the analyses for mediated moderation is done without controls. While criteria for assessing mediated moderation are nuanced and varied, the following basic criteria must be met in order to suggest mediated moderation via multiple regression. To begin, the analysis can only be performed if the potential mediator is correlated with the dependent variable of interest, (Bucy & Tao, 2007; Muller, Judd, and Yzerbyt, 2005, Hayes (2009), Edwards & Lambert (2007). Out of the four thoughts/feelings measures, only “threat” thoughts correlated with attitudes towards reformers  $r(193) = .184, p = .01$ . Therefore, threat will be tested as a mediator. The other three potential mediators are not correlated with the dependent variable in the following regression models, anxious:  $r(193) = -.03, p = .68$ ; death:  $r(193) = .111, p = .13$ ; insecure:  $r(193) = .070, p = .33$ ) and thus do not meet this criterion. Adapting the methods of Muller et al. (2005) and Bucy & Tao (2007) to the extant data, it can be said that the “initial criteria” for mediated moderation cannot be achieved unless the following three  $p$  values from the equations below are statistically significant.

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \varepsilon_1 p_{MSxB} = .076 \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \varepsilon_2 p_{MSxB} = .957 \quad (2)$$

$$Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \varepsilon_3 p_{MSxB} = .007 \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of political ideology, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of attitudes towards reformers. In this case, since it is the MSxB interaction (and not the USxB) interaction which achieved or neared significance), we look only at the  $p$  values corresponding to the MSxB interactions here. In this case, the coefficient of the MSxB interaction of the second equation does not reach statistical significance  $t(175) = 0.05$ ,  $p_{MSXB} = .957$ , and therefore the “initial criteria”(referring to the 3 significance values) for mediated moderation are not met in this case.

While the above is sufficient to deny mediated moderation, I will continue with subsequent mediated moderation procedures for the purposes of illustration. Consider the case that the “initial criteria” are met with all three  $p$  values achieving statistical significance, we would move onto the “secondary criteria” for mediated moderation, which states that the significant (or marginally significant) coefficient of  $\beta_{MSXB}$  from equation 1 must be reduced in magnitude when the additional factors of equation 3, ( $\beta_M + \beta_{MB}$ ) are introduced into the model. That is to say  $\beta_{MSXB35}$  in equation 3 should be reduced in magnitude from  $\beta_{MSXB15}$  in equation 1. For this MS x Political Ideology interaction, the relevant coefficient actually increased (rather than reduced) in magnitude, with  $\beta_{MSXB15} = -0.308$ , and  $\beta_{MSXB35} = -0.484$ . Thus, we preclude the possibility of mediated moderation here.

**Attention to politics interaction. *Step 1.*** The (a) US and (b) MS dummy codes, in addition to all main effects (and controls where applicable) were entered along with the

moderator of political attention/attention to politics (abbreviated ATTN) at step 1. Linear regression results at step 1 revealed no significant effect of: US on attitudes toward reformers ( $B = -0.002$ ,  $\beta = -0.002$ ,  $SE = 0.088$ ,  $t(189) = -0.022$ ,  $p = .983$ ), without controls, ( $B = 0.003$ ,  $\beta = 0.003$ ,  $SE = 0.098$ ,  $t(185) = 0.033$ ,  $p = .974$ ), with all controls), nor for MS ( $B = 0.020$ ,  $\beta = 0.019$ ,  $SE = 0.089$ ,  $t(189) = 0.222$ ,  $p = .824$ ), without controls (see Table 8); ( $B = -0.058$ ,  $\beta = -0.054$ ,  $SE = 0.123$ ,  $t(185) = -0.467$ ,  $p = .641$ ), with all controls (see Table 9).

Table 8. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reform Regressed Onto Condition and the Moderator of Attention to Politics, Without Controls, Study 1

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	-.002	.088	-.002	-.002	.088	-.002
Mortality salience (MS)	.020	.089	.019	.026	.089	.025
Political attention (ATTN)	.079	.073	.079	-.090	.134	-.090 <sup>+</sup>
US * ATTN	—	—	—	.373*	.187	.206
MS * ATTN	—	—	—	.135	.176	.086
Constant	-.006	.062	—	-.012	.062	—
$R^2(R^2 \text{ Adj})$	.007 (-.009)			.028 (.002)		
$F \text{ Change in } R^2$	.425			2.057		

Note. Referent group for Condition = Control.

<sup>+</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Step 1 did not reveal a significant main effect of political attention predicting attitudes toward reformers in the model without controls ( $B = 0.079$ ,  $\beta = 0.079$ ,  $SE = 0.073$ ,  $t(189) = 1.094$ ,  $p = .276$ ), or in the model with controls ( $B = 0.059$ ,  $\beta = 0.059$ ,  $SE = 0.071$ ,  $t(185) = 0.828$ ,  $p = .408$ , with all controls).

Table 9. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reform Regressed Onto Condition, the Moderator of Attention to Politics, With Controls, Study 1

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	.003	.098	.003	-.009	.098	-.008
Mortality salience (MS)	-.058	.123	-.054	-.066	.123	-.062
Political attention (ATTN)	.059	.071	.059	-.130	.132	-.130
Death thoughts (DT)	.083	.118	.083	.094	.119	.094
Anxious thoughts (AT)	-.276*	.114	-.276	-.274*	.113	-.274
Insecure thoughts (IT)	.003	.131	.003	.043	.135	.043
Threat thoughts (TT)	.328**	.120	.328	.298*	.127	.298
US * ATTN	—	—	—	.339 <sup>+</sup>	.187	.188
MS * ATTN	—	—	—	.208	.175	.132
Constant	.017	.072	—	.020	.072	—
$R^2(R^2 \text{ Adj})$	.082 (.047)			.098 (.054)		
$F$ Change in $R^2$	2.347*			1.681		

Note. Referent group for Condition = Control.

<sup>+</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Step 2.** Each of the dummy code x moderator interaction terms were entered in step 2. Regression analyses revealed a significant interaction between US and political attention predicting attitudes toward reformers, without controls ( $B = 0.373$ ,  $\beta = 0.206$ ,  $SE = 0.187$ ,  $t(187) = 1.991$ ,  $p = .048$ ), which became marginally significant when all controls were entered into the model ( $B = 0.339$ ,  $\beta = 0.188$ ,  $SE = 0.187$ ,  $t(183) = 1.808$ ,  $p = .072$ ). The interaction between MS and political attention predicting attitudes towards reformers did not yield significant results without controls ( $B = 0.135$ ,  $\beta = 0.086$ ,  $SE = 0.176$ ,  $t(187) = 0.768$ ,  $p = .444$ ), or with controls ( $B = 0.208$ ,  $\beta = 0.132$ ,  $SE = 0.175$ ,  $t(183) = 1.190$ ,  $p = .236$ ). See Tables 8 and 9.

**Simple slopes analyses.** Following up on the significant US x political attention interaction, the simple slopes for this interaction failed to reach statistical significance

either with or without controls, for both those high and low in political attention. High political attention without controls; ( $B = 0.184$ ,  $\beta = 0.175$ ,  $SE = 0.129$ ,  $t(187) = 1.433$ ,  $p = .154$ ), and with controls ( $B = 0.161$ ,  $\beta = 0.153$ ,  $SE = 0.131$ ,  $t(183) = 1.230$ ,  $p = .220$ ). Low political attention without controls: ( $B = -0.188$ ,  $\beta = -0.179$ ,  $SE = 0.128$ ,  $t(187) = -1.476$ ,  $p = .142$ ), and with controls ( $B = -0.178$ ,  $\beta = -0.169$ ,  $SE = 0.141$ ,  $t(183) = -1.265$ ,  $p = .207$ ). See Figure 2. When exposed to uncertainty, those high in political attention exhibited more negative attitudes towards reformers, and those low in political attention exhibiting more positive attitudes, though, as reported above, these simple slopes did not reach statistical significance.

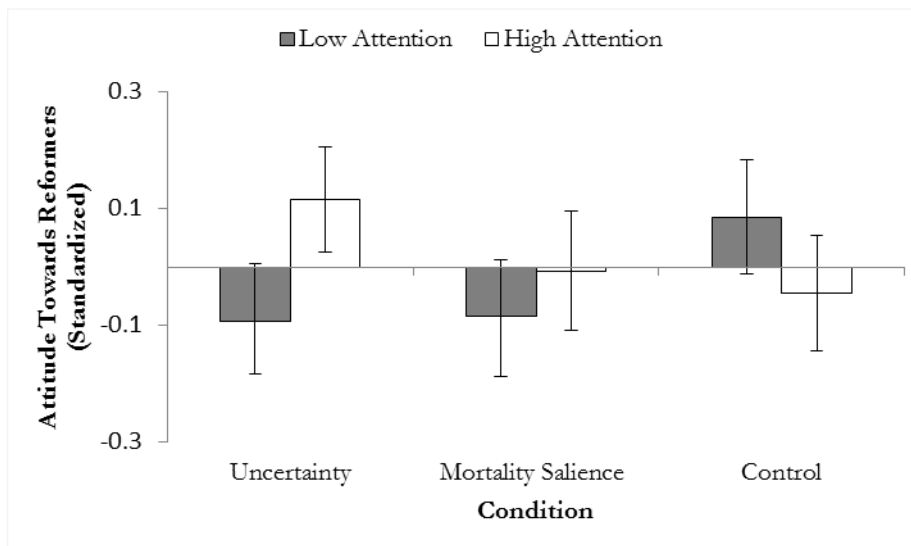


Figure 2. Estimated Marginal Means of Each Condition for the Dependent Variable of Attitudes Towards Reformers, Moderated by Attention to Politics, With Controls. Error bars represent  $\pm 1$  standard deviation from the mean, Study 1.

**Mediated moderation.** Procedures for establishing mediated moderation here (and throughout) are identical to that described previously. The “initial criteria” for mediated moderation cannot be achieved unless the following three  $p$  values from the equations

below are statistically significant. Accordingly, the significance of the three pertinent equations was as follows:

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \varepsilon_1 p_{USxB} = .048^* \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \varepsilon_2 p_{USxB} = .963 \quad (2)$$

$$Y = Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \varepsilon_3 p_{USxB} = .063 \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of political attention, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of attitudes towards reformers. In this case, since it is the USxB interaction (and not the MSxB) interaction which achieved or neared significance), we look only at the  $p$  values corresponding to the USxB interactions here. In this case, the coefficient of the USxB interaction of the second equation does not reach statistical significance  $t(187) = 0.05$ ,  $p_{\beta_{USXB}} = .963$ , and therefore mediated moderation is disqualified.

### Study 1: Analysis Summary

The Manipulation Check and Thoughts/Feelings measures demonstrate that the primes were effective in eliciting the desired affective response in each condition. However, the expected main effects of the prime did not emerge. Two regression models did emerge significant, however. The first, MS X Political Ideology interaction, is theoretically consistent with a-priori hypothesis H2(y) as originally formulated, except that the effect occurred in the mortality salience condition, as opposed the uncertainty salience condition. When primed with mortality salience, conservatives’ dislike of reformers became relatively more polarized in the direction of disliking, and liberals’

preference for reformers became relatively more pronounced. The US x Attention interaction as described (with those high in attention harboring more negative attitudes towards reformers under conditions of uncertainty) did not appear to be consistent with any of the a-priori hypotheses. Regression models were assessed with and without controls, as reported in the correspondingly labeled tables throughout the analysis.

## **CHAPTER FIVE**

### **PILOT STUDY**

In order to avoid mono-operation bias and other potential problems associated with staking one's theoretical claims on a single operationalization of independent variable, the aim of experiment 2 was to replicate experiment 1 using a different priming method. A pilot study was conducted in order to determine which new priming method should be used in experiment 2: a list recall prime or a word search prime. In the pilot study, the uncertainty priming materials utilizing the following methods of a) list recall uncertainty b) word search uncertainty c) life event inventory uncertainty [LEI, used in study 1], and d) LEI control [also used in study 1] were evaluated with respect to the three manipulation check item ratings (Appendix). Whichever new prime demonstrated itself to be most efficacious in bolstering uncertain thoughts would be selected as the priming method to be implemented in experiment 2. That is to say, participants in the uncertainty condition of the selected "most efficacious" priming implementation should feel more uncertainty salience compared to mortality salience and control topic salience; as well as more uncertainty salience compared to the other priming implementations of uncertainty tested. The list recall method consisted of asking participants to memorize and then recall a list containing five words with connotations to uncertainty: uncertain, shaky, gamble, dicey, and wavering. The word search method



consisted of asking the participant to locate these same words hidden in a word search puzzle.

### **Pilot Test Results**

82 American individuals participated in the study arranged through Amazon Mechanical Turk. Three one-way analyses of variance (ANOVA) were performed to determine whether or not participants in the four conditions differed significantly in their scores on the three dependent variables (see Table 10). Significant findings emerged only for the dependent variable of uncertainty salience  $F(3, 78) = 14.173, p < .001, \eta^2 = .353$ , to be followed up with pairwise comparisons. Post-hoc comparisons using Tukey's HSD indicated that the mean of the word search uncertainty condition ( $M = 5.273, SD = 1.549$ , was significantly greater than the mean for the control condition ( $M = 2.952, SD = 2.334, p < .001$ ). The mean rating of the LEI uncertainty condition ( $M = 6.400, SD = 0.940$ ) was also significantly greater than the mean for the control condition ( $M = 2.952, SD = 2.334, p < .001$ ). The mean rating of the LEI uncertainty condition was significantly greater than the mean for the word search uncertainty condition ( $p < .001$ ). No other statistically significant group differences were found (see Table 11).

Table 10. ANOVA of Manipulation Check by Condition, Pilot Study

Dependent variable	List recall		Word search		Control		Life event inventory		<i>F</i>	<i>p</i>	$\eta^2$	Tukey's HSD
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Uncertainty salience check	4.211***	1.960	5.273***	1.549	2.952***	2.334	6.400***	0.940	14.173	< .001	.353	1, 3 < 4; 3 < 2
Control topic salience check	3.316	2.540	2.046	1.812	2.191	2.040	2.400	2.137	1.413	.245	.052	—
Mortality salience check	2.158	1.864	1.955	1.430	1.238	0.889	2.350	1.872	2.016	.119	.072	—

*Note.* Referent group for Condition = Control.

<sup>+</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Table 11. Post Hoc Comparisons from Tukey's Honestly Significant Difference Test, Pilot Study

Dependent variable / condition (I)	Condition (J)	Mean difference (I-J)	SE	p
Uncertainty				
List recall	Word search	-1.062	0.555	.231
List recall	Control	1.258	0.561	.121
List recall	Life event inventory	-2.189**	0.568	.001
Word search	List recall	1.062	0.555	.231
Word search	Control	2.320***	0.541	< .001
Word search	Life event inventory	-1.127	0.548	.176
Control	List recall	-1.258	0.561	.121
Control	Word search	-2.320***	0.541	< .001
Control	Life event inventory	-3.448***	0.554	< .001
Life event inventory	List recall	2.189**	0.568	.001
Life event inventory	Word search	1.127	0.548	.176
Life event inventory	Control	3.448***	0.554	< .001
Control topic salience check				
List recall	Word search	1.270	0.668	.236
List recall	Control	1.125	0.676	.349
List recall	Life event inventory	0.916	0.684	.541
Word search	List recall	-1.270	0.668	.236
Word search	Control	-0.145	0.651	.996
Word search	Life event inventory	-0.355	0.659	.950
Control	List recall	-1.125	0.676	.349
Control	Word search	0.145	0.651	.996
Control	Life event inventory	-0.210	0.667	.989
Life event inventory	List recall	-0.916	0.684	.541
Life event inventory	Word search	0.355	0.659	.950
Life event inventory	Control	0.210	0.667	.989
Mortality salience check				
List recall	Word search	0.203	0.486	.975
List recall	Control	0.920	0.491	.249
List recall	Life event inventory	-0.192	0.497	.980
Word search	List recall	-0.203	0.486	.975
Word search	Control	0.716	0.473	.435
Word search	Life event inventory	-0.395	0.479	.843
Mortality salience check (cont'd)				
Control	List recall	-0.920	0.491	.249
Control	Word search	-0.716	0.473	.435
Control	Life event inventory	-1.112	0.485	.108
Life event inventory	List recall	0.192	0.497	.980
Life event inventory	Word search	0.395	0.479	.843
Life event inventory	Control	1.112	0.485	.108

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

### **Pilot Test Discussion**

These results suggest that both the LEI and Word Search manipulations produced greater uncertainty than the control condition, although this effect was more strongly pronounced for the LEI (already deployed in experiment 1). Thus, the comparison among priming methods demonstrates that against the control condition, the LEI and the word search conditions both primed uncertainty thoughts to a greater degree compared to control, while the list priming method did not. The word search prime was not quite as effective as the LEI in eliciting uncertainty salience. In other words, the word search prime elicited more uncertainty salience than the control condition, but not more than the LEI condition. Since the LEI was already deployed in experiment 1, this left only the word search prime as a viable option for experiment 2. In the pilot, none of the various uncertainty primes exhibited any effect on participants' mortality salience or control topic salience ratings (see Table 11).

## **CHAPTER SIX**

### **EXPERIMENT 2**

Between experiment 1 and experiment 2, theoretical rationale and hypotheses are exactly identical. Save for the change from LEI to Word Search, the methods, procedure, and analysis protocol run on study 2 are the same as that of study 1. In experiment 2, there was a different puzzle for each of the three conditions. In each condition, participants were asked to look at the word search puzzle in which five words were hidden. In the uncertainty salience condition, words in the first puzzle include: uncertain, shaky, gamble, dicey, and wavering. In the mortality salience condition, words will include: death, mortal, grave, tombs, demise. In the control condition, words in the first puzzle include: television, dust, goggles, afternoon, spot (see Appendix). After being randomly assigned to one of the puzzle three conditions, participants were challenged to find all the words in the puzzle in under two minutes, at which point a timer expired and participants were asked to go on to the subsequent questionnaire.

With this new manipulation method (word search prime), some potential validity threats idiosyncratic to the thought generation LEI uncertainty-prime can be said to be guarded against. In experiment 1, it was found that recalling moments where one feels uncertain tangentially activates mortality salience to some extent. The problem potentially exists because participants in the uncertainty condition might generate memories pertaining to death, and therefore, the uncertainty and mortality salience

conditions become blurred in this manner. The priming method in experiment 2 addresses this issue further by removing the idea of generated memories and their associated confounds which may be present with the life event inventory (LEI) methodology. The psychological effects of recalling autobiographical memories meant to elicit particular emotions (experiment 1) may differ from implicit concept activation via a word search prime (experiment 2). This may occur as a result of a self-referencing effect inherent in the generation of autobiographical information, or any number of other consequences of that particular manipulation which may subtly influence the relation between the independent variable construct (uncertainty) and our inevitably imperfect operationalization of it. Hence, replication of design with the word search manipulation offers some protection against the dangers of mono-operation bias. 197 American individuals participated in the study arranged through Amazon Mechanical Turk.

### **Manipulation Check**

There was a statistically significant mean difference in the mortality salience manipulation check item self-report ratings between the three randomly assigned, experimentally manipulated independent variable conditions  $F(2, 194) = 9.196, p < .001, \eta^2 = .087$ . Post-hoc comparisons using the Tukey HSD test indicated that the mean manipulation check rating for the mortality salience condition ( $M = 2.861, SD = 1.878$ ) was significantly greater than that of the uncertainty condition ( $M = 1.776, SD = 1.346; p < .001$ ). The mortality salience condition was also significantly greater than the control topic salience condition ( $M = 1.877, SD = 1.536; p = .002$ ).

Notably, there were no differences among conditions on the other two manipulation check items (uncertainty salience, and control topic salience). For differences between groups, see the items “Uncertainty salience check,” “Control topic salience check,” and “Mortality salience check” in Tables 12 and 13. Unlike in the pilot study, the uncertainty puzzle prime failed to produce heightened levels of self-reported thoughts about uncertainty compared to control.

Contrasting the manipulation check item analyses of experiment 1 with experiment 2, there are some key differences to note. In experiment 1, both LEI primed uncertainty and LEI primed mortality salience produced greater levels of their respective manipulation check item rating; with respect to the control condition as well as each other. LEI primed uncertainty also caused an increase in mortality salience manipulation check ratings, but not as high as in the mortality salience condition. LEI primed mortality salience also caused an increase in uncertainty salience manipulation check ratings, but not as high as in the uncertainty salience condition.

Table 12. ANOVA of Manipulation Check and Thoughts/Feelings Variables by Condition, Study 2

	Uncertainty		Mortality Salience		Control					
Between groups effect	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	$\eta^2$	Tukey's HSD
Uncertainty salience check	3.508	1.972	3.308	2.015	3.262	1.881	0.296	.744	.003	—
Control topic salience check	2.015	1.728	2.446	2.031	2.631	2.176	1.679	.189	.017	—
Mortality salience check	1.776***	1.346	2.862***	1.878	1.877***	1.536	9.196	< .001	.087	1, 3 < 2
Death thoughts	1.716**	1.216	2.692**	1.758	1.939**	1.638	7.128	.001	.068	1, 3 < 2
Anxious thoughts	2.687	1.500	3.046	1.849	2.754	1.803	0.808	.447	.008	—
Insecure thoughts	2.299	1.467	2.800	1.752	2.262	1.670	2.216	.112	.022	—
Threat thoughts	1.881+	1.503	2.508+	1.778	2.062+	1.694	2.481	.086	.025	—
Positive affectivity	18.642	4.773	19.200	4.262	19.185	4.531	0.327	.722	.003	—
Negative affectivity	8.164	4.433	9.062	4.815	7.846	4.210	1.281	.280	.013	—

Note.  $\eta_p^2$  = partial eta squared.

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



Table 13. Post Hoc Comparisons from Tukey's Honestly Significant Difference Test, Study 2

Dependent variable / condition (I)	Condition (J)	Mean Difference (I-J)	SE	p
Uncertainty salience check				
Uncertainty	Mortality salience	0.200	0.341	.828
Uncertainty	Control	0.246	0.341	.751
Control	Mortality	-0.046	0.343	.990
Control topic salience check				
Uncertainty	Mortality salience	-0.431	0.346	.426
Uncertainty	Control	-0.616	0.346	.178
Control	Mortality	0.185	0.348	.857
Mortality salience check				
Uncertainty	Mortality salience	-1.085***	0.278	< .001
Uncertainty	Control	-0.101	0.278	.930
Control	Mortality	-0.985**	0.281	.002
Death thoughts				
Uncertainty	Mortality salience	-0.976**	0.270	.001
Uncertainty	Control	-0.222	0.270	.690
Control	Mortality	-0.754*	0.272	.017
Anxious thoughts				
Uncertainty	Mortality salience	-0.360	0.300	.455
Uncertainty	Control	-0.067	0.300	.973
Control	Mortality	-0.292	0.302	.598
Insecure thoughts				
Uncertainty	Mortality salience	-0.501	0.284	.184
Uncertainty	Control	0.037	0.284	.991
Control	Mortality	-0.538	0.286	.147
Threat thoughts				
Uncertainty	Mortality salience	-0.627+	0.289	.079
Uncertainty	Control	-0.181	0.289	.806
Control	Mortality	-0.446	0.291	.278
Positive affectivity				
Uncertainty	Mortality salience	-0.558	0.789	.759
Uncertainty	Control	-0.543	0.789	.771
Control	Mortality	-0.015	0.794	1.000
Negative affectivity				
Uncertainty	Mortality salience	-0.897	0.782	.486
Uncertainty	Control	0.318	0.782	.913
Control	Mortality	-1.215	0.788	.274

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

In experiment 2, word search primed mortality salience produced the greatest levels of mortality salience manipulation check item ratings compared to each of the other two conditions. Notably, however, it did not produce greater levels of uncertainty salience as well (as it did in experiment 1 with LEI). Similarly, the word search primed uncertainty did not produce heightened levels of mortality salience. This could be seen as positive, as the potential confound of experiment 1 (uncertainty condition priming incidental mortality salience, and mortality condition priming incidental uncertainty salience) appears not to be an issue in experiment 2. Surprisingly however, the experiment 2 word search uncertainty priming condition failed to produce heightened levels of self-report uncertainty salience, as assessed via ratings on the uncertainty salience manipulation check item.

Given that the pilot test and experiment 2 deployed the same manipulation of word-search uncertainty, we naturally expected manipulation check results from the pilot to replicate in experiment 2, but they did not. It is possible that this is because in experiments 1 and 2, the PANAS and dependent variable measures were administered subsequent to the prime and before assessing these three manipulation check items. In the pilot, participants were exposed to the manipulation, given the three manipulation check items, and then dismissed (No PANAS). Thus, in experiment 2, more time and conceptual interference may have occurred between priming and the assessment of the manipulation checks, eliminating the effects showcased in the pilot test for the uncertainty crossword prime.

It could be the case that the prime failed to activate the relevant cognitive-emotional constructs in experiment 2 necessary for producing effects on the dependent variable(s); Alternatively, it could be the case that participants exposed to the word search were less self-aware of the effects of the prime upon their cognitions and emotions, yet the prime still exerted its effects below the level of awareness necessary to manifest via the manipulation check self-report items. As will soon be discussed, the latter case seems likely, as various US X Moderator interactions did indeed produce a variety of significant results in experiment 2 regression models despite lackluster results on the uncertainty salience manipulation check. In the studies of Schwarz & Clore (1983), participants expressed a more positive mood on sunny days, but the effect was eliminated when the possible influence of the weather upon their mood was made salient by the researcher. In a similar vein, the PANAS introduced between the prime and the manipulation check item in study 2 (and not the pilot) may have obscured participant awareness with respect to the effects of the prime on the participants' mental state, allowing the prime to exhibit effects on the dependent variables, yet show no differences on the manipulation check items (Lombardi et al. 1987; Strack et al., 1993). Such research suggests that the most direct or blatant primes are often consciously discounted, while subtler primes may exert their influence undetected. "Filler tasks" are often deployed in such a manner within survey research so that participants' awareness is directed away from the effects of the prime (See, Bargh & Chartrand, 2000, Loersch et al. 2011) for a discussion of this and similar effects in priming and automaticity research.

## Preliminary Analyses

Preliminary analyses (in preparation for the regression analyses which directly tests the experimental hypotheses discussed) were performed examining the relation between condition and the moderator variables. Thirteen one-way analyses of variance (ANOVA) were performed to determine whether or not participants in the three manipulated conditions differed significantly on these variable ratings (see Table 4). Significant group differences were found for one out of the thirteen variables: trust in government,  $F(2, 194) = 3.511, p = .032, \eta^2 = .035$ . Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the uncertainty condition ( $M = 4.552, SD = 1.449$ ) was significantly less than the mean score for the control topic condition ( $M = 5.200, SD = 1.449; p = .027$ ). Thus, random assignment to condition was not achieved on this singular moderating variable. As with experiment 1, we hoped that these 13 individual difference variables would be randomly distributed across randomly assigned experimentally manipulated conditions. There are two ways to interpret such an outcome, however; one interpretation being that random assignment failed, the other being that the uncertainty prime caused decreased trust in government in experiment 2 (i.e. trust in government acted as a dependent variable, rather than a more stable individual difference moderator as expected). Therefore, two significant regressions (yet to be presented) which arose in experiment 2 involving trust in government as the moderator should be viewed with a high degree of caution, as a key assumption of interactive regression models (moderator should be independent of the remaining independent variable(s)) has been violated in this case. ANOVAs were also performed to determine whether or not

participants in the three manipulated conditions differed significantly in their scores on the positive affect and negative affect subscales of the PANAS; they did not (see Table 14).

### **Thought and Feeling Measures**

Identical to experiment 1, these consisted of the four questions, after the manipulation check, asking participants: “I thought about or felt death and dying.” “I thought about or felt anxious.” “I thought about or felt insecure.” “thought about or felt threatened.” Out of these four thoughts/feeling ratings, only ratings on the item “I thought about or felt death and dying” differed by condition, with the other three items showing no differences by condition.

There was a statistically significant mean difference in the death thoughts/feelings ratings between the three manipulated conditions,  $F(2, 194) = 7.128, p = .001, \eta^2 = .068$ . See items “Death thoughts” in Table 2. Post-hoc comparisons using the Tukey HSD test indicated that the mean rating for the mortality salience condition ( $M = 2.692, SD = 1.758$ ) was significantly greater than the mean rating for the uncertainty condition ( $M = 1.716, SD = 1.216; p = .001$ ). The mortality salience condition ( $M = 2.692, SD = 1.758$ ) was also significantly greater than the control topic condition ( $M = 1.939, SD = 1.638; p = .017$ ). There were no significant differences between uncertainty and control conditions on this item ( $p = .69$ ). See item “Death thoughts” in Table 3.

Table 14. ANOVA of Moderator Variables by Condition, Study 2

Between Groups Effect	Uncertainty		Mortality salience		Control		<i>F</i>	<i>p</i>	$\eta^2$	Tukey's HSD
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Intolerance of uncertainty	34.851	11.162	35.092	9.839	34.739	9.553	0.020	.980	< .001	—
Intolerance of ambiguity	-0.851	8.543	-2.446	7.278	-1.492	7.351	0.706	.495	.007	—
System justification (American)	14.403	5.595	14.723	4.939	16.200	4.822	2.284	.105	.023	—
Social dominance orientation	-17.791	21.891	-15.446	19.503	-20.292	20.568	0.892	.412	.009	—
Belief in a just world	22.119+	6.951	23.769+	6.547	24.677+	6.293	2.548	.081	.026	—
Trust in government	4.552*	1.449	4.985*	1.397	5.200*	1.449	3.511	.032	.035	1 < 3
Political self-efficacy	4.343	1.572	4.831	1.654	4.631	1.577	1.548	.215	.016	—
Political interest	5.313	1.716	5.631	1.485	5.539	1.631	0.677	.509	.007	—
Political attention	5.463	1.439	5.708	1.400	5.769	1.412	0.868	.422	.009	—
Political knowledge	5.328	1.284	5.523	1.382	5.631	1.306	0.887	.414	.009	—
Voting behavior	0.761	0.720	0.892	0.732	0.892	0.710	0.732	.482	.007	—
Political ideology	-0.056	0.551	0.019	0.487	0.035	0.464	0.579	.561	.006	—
Partisanship	-0.057	0.487	-0.058	0.555	0.099	0.454	1.928	.149	.023	—

Note.  $\eta^2$  = eta squared.

+*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Unlike in experiment 1, none of the other “thoughts and feelings” measures (anxious, insecure, threat) differed by condition in experiment 2, according to the self-reported ratings for these items. As mentioned previously, we speculate either that the priming method in experiment 2 (word search) was either less effective than the LEI; or that it is comparably effective but subtler (less “blatant”) and thus less likely to be recognized and reported via these self-report items, a possibility recognized by automaticity and priming scholars including, Bargh & Chartrand, (2000); Lombardi et al. (1987); Loresch et al. (2011).

### **Main Analyses**

As with the procedures reported above for experiment 1, the main analyses for experiment 2 were performed in an identical fashion. Analyses were performed to examine the relation between condition and each of the three dependent variables: status quo preference scale, attitudes towards reformers, and support for regime change. Three one-way analyses of variance (ANOVA) were performed to determine whether or not participants in the three experimentally manipulated conditions differed significantly in their scores on these three dependent variables respectively.

Results demonstrated that there were no between groups differences on these dependent variables (see Table 15). Additionally, analysis of covariance (ANCOVA) of condition predicting each of the respective dependent variables with the four thoughts/feelings measures entered as covariates was performed. In each case, the pattern of means did not differ from the equivalent model ANOVA sans covariates, all ( $p > .2$ ). As with experiment 1, Hypothesis 1 (H1) without interactions was not supported in

experiment 2. In addition to these ANOVA and ANCOVA models, main effects of condition were tested as factors within each of the yet to be discussed experiment 2 regression model results, in both additive (Step 1) and interactive (Step 2) models. As with experiment 1, the regression results in experiment 2 shall demonstrate no main effects of condition in any of the regression models, either with or without controls, all ( $p > .2$ ).

### **Study 2: Two-Way Interaction Models (Moderator by Condition)**

Interaction terms were created by multiplying the variables together and entering the products as predictor variables in a hierarchical linear regression model as described previously. Identical to experiment 1, each moderator was tested separately for each dependent variable in two models, where the second model included all four control variables of (a) death thoughts, (b) anxious thoughts, (c) insecure thoughts, and (d) threat thoughts. All coding procedures are exactly identical to those in experiment 1.

Two-way interactions significant for the dependent variable of status quo preference scale included: (a) US X Political Ideology, and (b) US X Party Identification. Several two-way interactions were found to be significant at the  $p < .05$  level for the dependent variable of attitude towards reformers: (a) MS X Political Ideology, and (b) MS X Social Dominance Orientation, (c) MS X System Justification, (d) US X Intolerance of Uncertainty, (e) US X Political Self-Efficacy, and (f) US X Trust in Government. Two-way interactions significant for the dependent variable of regime change included: (a) US X Belief in a Just World, and (b) US X Trust in Government.



Table 15. ANOVA of Three Dependent Variables by Condition, Study 2

	Uncertainty		Mortality salience		Control		<i>F</i>	<i>p</i>	$\eta^2$	Tukey's HSD
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Between groups effect										
Status quo preference	38.761	9.232	38.246	10.047	37.062	9.791	0.531	.589	.005	—
Attitude toward reform	12.015	6.285	13.277	6.279	12.708	5.528	0.722	.487	.007	—
Regime change	9.448	3.831	8.923	3.768	8.985	3.595	0.391	.677	.004	—

*Note.*  $\eta^2$  = eta squared.

+  $p < .10$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

### Interactions: Predicting Status Quo Preference

**Political ideology. Step 1.** The (a) US and (b) MS dummy codes, in addition to all main effects (and controls where applicable) were entered along with the moderator of political ideology (abbreviated PIDEO) at step 1. Linear regression results at step 1 revealed no significant effect of US on status quo preference, ( $B = 0.085$ ,  $\beta = 0.081$ ,  $SE = 0.088$ ,  $t(180) = 0.967$ ,  $p = .335$ ), without controls, ( $B = 0.095$ ,  $\beta = 0.091$ ,  $SE = 0.079$ ,  $t(176) = 1.201$ ,  $p = .231$ ), with all controls), nor for MS ( $B = 0.048$ ,  $\beta = 0.046$ ,  $SE = 0.088$ ,  $t(180) = 0.552$ ,  $p = .581$ ), without controls; ( $B = 0.001$ ,  $\beta = 0.001$ ,  $SE = 0.080$ ,  $t(176) = 0.012$ ,  $p = .991$ ), with all controls (see Tables 16 and 17).

Table 16. Hierarchical Multiple Linear Regression Analysis for Status Quo Preference Regressed Onto Condition and the Moderator of Political Ideology, Without Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	.085	.088	.081	.082	.087	.079
Mortality salience (MS)	.048	.088	.046	.057	.087	.055
Political ideology (PIDEO)	-.142 <sup>+</sup>	.072	-.145	.117	.131	.119
US X PIDEO	—	—	—	-.469**	.173	-.300
MS X PIDEO	—	—	—	-.243	.183	-.137
Constant	-.051	.061	—	-.060	.060	—
$R^2$ ( $R^2$ Adj)	.028 (.011)			.066 (.040)		
$F$ Change in $R^2$	1.702			3.675*		

Note. Referent group for Condition = Control.

<sup>+</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 17. Hierarchical Multiple Linear Regression Analysis for Status Quo Preference Regressed Onto Condition, the Moderator of Political Ideology, With Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	.095	.079	.091	.091	.077	.087
Mortality salience (MS)	.001	.080	.001	.013	.079	.012
Political ideology (PIDEO)	-.200**	.065	-.204	.021	.117	.021
Death thoughts (DT)	.017	.098	.018	-.009	.096	-.009
Anxious thoughts (AT)	.208*	.094	.210	.204*	.093	.206
Insecure thoughts (IT)	-.179	.117	-.180	-.196+	.115	-.198
Threat thoughts (TT)	.435***	.121	.445	.467***	.120	.477
US X PIDEO	—	—	—	-.435**	.155	-.278
MS X PIDEO	—	—	—	-.154	.163	-.087
Constant	-.041	.055	—	-.050	.054	—
<i>R</i> <sup>2</sup> ( <i>R</i> <sup>2</sup> Adj)	.247 (.217)			.282 (.244)		
<i>F</i> Change in <i>R</i> <sup>2</sup>	8.254***			4.166*		

Note. Referent group for Condition = Control.

+*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Step 1 revealed a marginally significant main effect of political ideology predicting status quo preference in the model without controls ( $B = -0.142$ ,  $\beta = -0.145$ ,  $SE = 0.072$ ,  $t(180) = -1.964$ ,  $p = .051$ ), such that leftist/liberals actually exhibited slightly more status quo preference (opposite of the expected pattern, See rightmost column of Figure 3). When controls were entered into the model, this effect became statistically significant, ( $B = -0.200$ ,  $\beta = -0.204$ ,  $SE = 0.065$ ,  $t(176) = -3.067$ ,  $p = .003$ , with all controls). The control variable of anxious thoughts was statistically significant in the step 1 control model ( $B = 0.208$ ,  $\beta = 0.210$ ,  $SE = 0.094$ ,  $t(176) = 2.203$ ,  $p = .029$ ), such that increases in anxious thoughts were associated with a greater status quo preference. The control variable of threat thoughts was also statistically significant in the step 1 control

model ( $B = 0.435$ ,  $\beta = 0.445$ ,  $SE = 0.121$ ,  $t(176) = 3.588$ ,  $p < .001$ ), such that increases in threat thoughts were associated with a greater status quo preference.

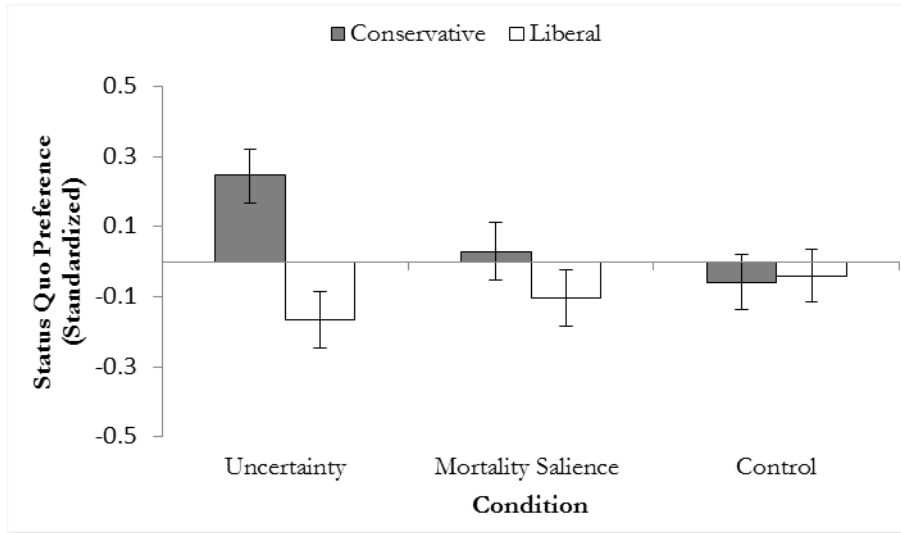


Figure 3. Estimated Marginal Means of Each Condition for the Dependent Variable of Status Quo Preference, Moderated by Political Ideology, With Controls. Error bars represent  $\pm 1$  standard error from the mean, Study 2.

**Step 2.** Regression analyses revealed a significant interaction between US and political ideology predicting status quo preference, without controls ( $B = -0.469$ ,  $\beta = -0.300$ ,  $SE = 0.173$ ,  $t(178) = -2.707$ ,  $p = .007$ ), which remained significant when all controls were entered into the model ( $B = -0.435$ ,  $\beta = -0.278$ ,  $SE = 0.155$ ,  $t(174) = -2.809$ ,  $p = .006$ ). The interaction between MS and political ideology predicting status quo preference did not yield significant results without controls ( $B = -0.243$ ,  $\beta = -0.137$ ,  $SE = 0.183$ ,  $t(178) = -1.327$ ,  $p = .186$ ), or with controls ( $B = -0.154$ ,  $\beta = -0.087$ ,  $SE = 0.163$ ,  $t(174) = -0.944$ ,  $p = .347$ ). The control variable of threat thoughts was statistically significant in the step 2 control model ( $B = 0.467$ ,  $\beta = 0.477$ ,  $SE = 0.120$ ,  $t(174) = 3.895$ ,  $p < .001$ ), and so was the control variable of anxious thoughts in the step 2 control model ( $B = 0.204$ ,  $\beta = 0.206$ ,  $SE = 0.093$ ,  $t(174) = 2.195$ ,  $p = .029$ . See Table 17.

**Simple slopes analyses.** Following up on the US X Political Ideology interaction, without controls, simple slopes analyses revealed that for Conservatives, those primed with uncertainty salience exhibited a greater status quo preference ( $B = 0.317$ ,  $\beta = 0.303$ ,  $SE = 0.122$ ,  $t(178) = 2.595$ ,  $p = .010$ ). With controls in the model, the remained statistically significant ( $B = 0.308$ ,  $\beta = 0.295$ ,  $SE = 0.109$ ,  $t(174) = 2.825$ ,  $p = .005$ ). Statistical significance was not achieved for Liberals primed with uncertainty salience without controls ( $B = -0.152$ ,  $\beta = -0.146$ ,  $SE = 0.123$ ,  $t(178) = -1.234$ ,  $p = .219$ ), or with controls ( $B = -0.126$ ,  $\beta = -0.121$ ,  $SE = 0.110$ ,  $t(174) = -1.150$ ,  $p = .252$ ). See Figure 3.

**Mediated moderation.** Procedures for establishing mediated moderation here (and throughout) are exactly identical to that described previously, in Bucy & Tao (2007), Muller et al. (2005), and are only pursued if the same basic criteria are met among variables. As mentioned previously, throughout the text empirical support for models of mediated moderation are completely lacking throughout; yet this fact does not affect the evaluation of any of the formally stated hypotheses. Accordingly, the significance of the Bucy & Tao (2007), Muller et al. (2005) equations is as follows:

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \epsilon_1 p_{USxB} = .007^{**} \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \epsilon_2 p_{USxB} = .723 \quad (2)$$

$$Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \epsilon_3 p_{USxB} = .0071^{**} \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of political ideology, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of status quo preference. In this case, since it is the USxB interaction (and not

the MSxB) interaction which achieved or neared significance, we look only at the  $p$  values corresponding to the USxB interactions here. In this case, the coefficient of the USxB interaction of the second equation does not reach statistical significance  $t(178) = -0.36$ ,  $p_{\beta \text{ USXB}} = .723$ , and therefore the “initial criteria” for mediated moderation are not met and we cannot proceed further down this line of inquiry. Furthermore, the relevant coefficient was not reduced from equation 1 to equation 3, disqualifying mediated moderation.

**Party identification. *Step 1.*** The (a) US and (b) MS dummy codes, in addition to all main effects (and controls where applicable) were entered along with the moderator of party identification (abbreviated PPARTY) at step 1. Linear regression results at step 1 revealed no significant effect of US on status quo preference, ( $B = 0.064$ ,  $\beta = 0.065$ ,  $SE = 0.083$ ,  $t(164) = 0.766$ ,  $p = .445$ ), without controls, ( $B = 0.078$ ,  $\beta = 0.079$ ,  $SE = 0.078$ ,  $t(160) = 0.995$ ,  $p = .321$ ), with all controls), nor for MS ( $B = -0.001$ ,  $\beta = -0.001$ ,  $SE = 0.085$ ,  $t(164) = -0.012$ ,  $p = .991$ ), without controls; ( $B = -0.021$ ,  $\beta = -0.021$ ,  $SE = 0.080$ ,  $t(160) = -0.257$ ,  $p = .797$ ), with all controls (see Tables 18 and 19).

Table 18. Hierarchical Multiple Linear Regression Analysis for Status Quo Preference Regressed Onto Condition and the Moderator of Party Identification, Without Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	.064	.083	.065	.068	.083	.070
Mortality salience (MS)	-.001	.085	-.001	.018	.085	.018
Party identification (PPARTY)	-.244**	.070	-.265	-.076	.125	-.083
US X PPARTY	—	—	—	-.378*	.175	-.228
MS X PPARTY	—	—	—	-.131	.168	-.087
Constant	-.035	.057	—	-.052	.057	—
<i>R</i> <sup>2</sup> ( <i>R</i> <sup>2</sup> Adj)	.077 (.060)			.104 (.076)		
<i>F</i> Change in <i>R</i> <sup>2</sup>	4.585**			2.403+		

Note. Referent group for Condition = Control.

+*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Table 19. Hierarchical Multiple Linear Regression Analysis for Status Quo Preference Regressed Onto Condition, the Moderator of Party Identification, With Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	.078	.078	.079	.082	.078	.084
Mortality salience (MS)	-.021	.080	-.021	-.002	.080	-.002
Party identification (PPARTY)	-.155*	.068	-.169	-.010	.117	-.011
Death thoughts (DT)	-.011	.105	-.011	-.018	.104	-.018
Anxious thoughts (AT)	.214*	.094	.227	.216*	.093	.229
Insecure thoughts (IT)	-.187	.117	-.196	-.196+	.117	-.205
Threat thoughts (TT)	.353**	.122	.382	.356**	.122	.385
US X PPARTY	—	—	—	-.340*	.163	-.206
MS X PPARTY	—	—	—	-.109	.156	-.072
Constant	-.035	.053	—	-.050	.054	—
<i>R</i> <sup>2</sup> ( <i>R</i> <sup>2</sup> Adj)	.227 (.193)			.249 (.206)		
<i>F</i> Change in <i>R</i> <sup>2</sup>	6.719***			2.285		

Note. Referent group for Condition = Control.

+*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Step 1 revealed a significant main effect of party identification predicting status quo preference in the model without controls ( $B = -0.244$ ,  $\beta = -0.265$ ,  $SE = 0.070$ ,  $t(164) = -3.495$ ,  $p = .001$ ), such that Democrats exhibited less negative attitudes towards the status quo, and Republicans exhibited more negative attitudes towards the status quo. When controls were entered into the model, this effect remained statistically significant, ( $B = -0.155$ ,  $\beta = -0.169$ ,  $SE = 0.068$ ,  $t(160) = -2.275$ ,  $p = .024$ , with all controls). The control variable of anxious thoughts was statistically significant in the step 1 control model ( $B = 0.214$ ,  $\beta = 0.227$ ,  $SE = 0.094$ ,  $t(160) = 2.285$ ,  $p = .024$ ), such that increases in anxious thoughts were associated with a greater status quo preference. The control variable of threat thoughts was also statistically significant in the step 1 control model ( $B = 0.353$ ,  $\beta = 0.382$ ,  $SE = 0.122$ ,  $t(160) = 2.887$ ,  $p = .004$ ), such that increases in threat thoughts were associated with a greater status quo preference.

**Step 2.** Regression analyses revealed a significant interaction between US and party identification predicting status quo preference, without controls ( $B = -0.378$ ,  $\beta = -0.228$ ,  $SE = 0.175$ ,  $t(162) = -2.152$ ,  $p = .033$ ), which remained significant when all controls were entered into the model ( $B = -0.340$ ,  $\beta = -0.206$ ,  $SE = 0.163$ ,  $t(158) = -2.086$ ,  $p = .039$ ). The interaction between MS and party identification predicting status quo preference did not yield significant results without controls ( $B = -0.131$ ,  $\beta = -0.087$ ,  $SE = 0.168$ ,  $t(162) = -0.778$ ,  $p = .438$ ), or with controls ( $B = -0.109$ ,  $\beta = -0.072$ ,  $SE = 0.156$ ,  $t(158) = -0.694$ ,  $p = .489$ ). The control variable of threat thoughts remained statistically significant in the step 2 control model ( $B = 0.356$ ,  $\beta = 0.385$ ,  $SE = 0.122$ ,  $t(158) = 2.927$ ,  $p = .004$ ). Moreover, the control variable of anxious thoughts returned significance in the



step 2 control model ( $B = 0.216$ ,  $\beta = 0.229$ ,  $SE = 0.093$ ,  $t(158) = 2.316$ ,  $p = .022$ ). See Tables 18 and 19.

**Simple slopes analyses.** Following up on the US X Party Identification interaction, without controls, simple slopes analyses revealed that for Republicans, those primed with uncertainty salience exhibited a greater status quo preference ( $B = 0.257$ ,  $\beta = 0.263$ ,  $SE = 0.124$ ,  $t(162) = 2.082$ ,  $p = .039$ ). With controls in the model, the effect remained statistically significant ( $B = 0.252$ ,  $\beta = 0.257$ ,  $SE = 0.115$ ,  $t(158) = 2.186$ ,  $p = .030$ ). Statistical significance was not achieved for Democrats primed with uncertainty salience without controls ( $B = -0.120$ ,  $\beta = -0.123$ ,  $SE = 0.118$ ,  $t(162) = -1.019$ ,  $p = .310$ ), or with controls ( $B = -0.088$ ,  $\beta = -0.090$ ,  $SE = 0.110$ ,  $t(158) = -0.801$ ,  $p = .424$ ). See Figure 4.

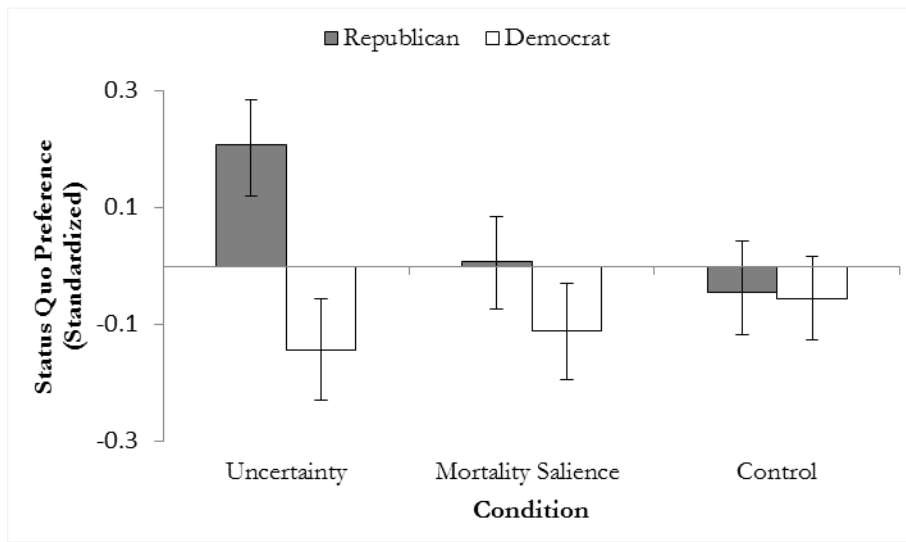


Figure 4. Estimated Marginal Means of Each Condition for the Dependent Variable of Status Quo Preference, Moderated by Party Identification, With Controls. Error bars represent  $\pm 1$  standard error from the mean, Study 2.

**Mediated moderation.** Procedures for establishing mediated moderation here are identical to that described previously. Accordingly, the significance of the three equations is as follows:

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \varepsilon_1 p_{USxB} = .033^* \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \varepsilon_2 p_{USxB} = .525 \quad (2)$$

$$Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \varepsilon_3 p_{USxB} = .045^* \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of party identification, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of status quo preference. In this case, since it is the USxB interaction (and not the MSxB) interaction which achieved or neared significance, we look only at the  $p$  values corresponding to the USxB interactions here. In this case, the coefficient of the USxB interaction of the second equation does not reach statistical significance  $t(162) = 0.64$ ,  $p_{\beta_{USXB}} = .525$  and therefore the “initial criteria” for mediated moderation are not met. Furthermore, the relevant coefficient was not nominally reduced in magnitude, disqualifying mediated moderation.

### **Predicting Attitudes Towards Reformers**

**Political ideology interaction. Step 1.** The (a) US and (b) MS dummy codes, in addition to all main effects (and controls where applicable) were entered along with the moderator of political ideology (abbreviated PIDEO) at step 1. Linear regression results at step 1 revealed no significant effect of US on attitudes toward reformers:  $B = -0.050$ ,  $\beta = -0.048$ ,  $SE = 0.087$ ,  $t(180) = -0.568$ ,  $p = .571$ ), without controls, ( $B = -0.039$ ,  $\beta = -$

0.038,  $SE = 0.081$ ,  $t(176) = -0.482$ ,  $p = .631$ ), with all controls), nor for MS ( $B = 0.018$ ,  $\beta = 0.017$ ,  $SE = 0.087$ ,  $t(180) = 0.201$ ,  $p = .841$ ), without controls; ( $B = -0.019$ ,  $\beta = -0.019$ ,  $SE = 0.083$ ,  $t(176) = -0.234$ ,  $p = .815$ ), with all controls (see Tables 20 and 21).

Table 20. Hierarchical Multiple Linear Regression Analysis for Attitudes Towards Reformers Regressed Onto Condition and the Moderator of Political Ideology, Without Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	-.050	.087	-.048	-.043	.087	-.041
Mortality salience (MS)	.018	.087	.017	.028	.087	.027
Political ideology (PIDEO)	-.177*	.072	-.180	.033	.131	.034
US * PIDEO	—	—	—	-.226	.173	-.145
MS * PIDEO	—	—	—	-.395*	.184	-.223
Constant	.007	.061	—	.000	.060	—
$R^2(R^2 \text{ Adj})$		.034 (.018)			.059 (.033)	
$F$ Change in $R^2$		2.135+			2.325	

Note. Referent group for Condition = Control.

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Step 1 revealed a significant main effect of political ideology predicting attitudes toward reformers in the model without controls ( $B = -0.177$ ,  $\beta = -0.180$ ,  $SE = 0.072$ ,  $t(180) = -2.455$ ,  $p = .015$ ), such that leftist/liberals exhibited more positive attitudes towards reformers, and right wing/conservative exhibited more negative attitudes towards them (concordant with study 1, as well as previously established literature). When controls were entered into the model, this effect remained significant, ( $B = -0.222$ ,  $\beta = -0.227$ ,  $SE = 0.067$ ,  $t(176) = -3.298$ ,  $p < .001$ , with all controls). The control variable of threat thoughts was statistically significant in the step 1 control model ( $B = 0.459$ ,  $\beta =$

0.471,  $SE = 0.125$ ,  $t(176) = 3.668$ ,  $p < .001$ ), such that increases in threat thoughts were associated with more negative attitudes towards reformers.

Table 21. Hierarchical Multiple Linear Regression Analysis for Attitudes Towards Reformers Regressed Onto Condition, the Moderator of Political Ideology, With Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	-.039	.081	-.038	-.035	.081	-.033
Mortality salience (MS)	-.019	.083	-.019	-.009	.083	-.008
Political ideology (PIDEO)	-.222**	.067	-.227	-.037	.123	-.038
Death thoughts (DT)	-.023	.101	-.024	-.031	.101	-.031
Anxious thoughts (AT)	.090	.098	.091	.078	.097	.079
Insecure thoughts (IT)	-.148	.120	-.150	-.139	.120	-.140
Threat thoughts (TT)	.459***	.125	.471	.457***	.125	.469
US * PIDEO	—	—	—	-.209	.162	-.134
MS * PIDEO	—	—	—	-.330+	.171	-.186
Constant	.014	.057	—	.007	.056	—
$R^2(R^2 \text{ Adj})$	.193 (.161)			.211 (.170)		
$F \text{ Change in } R^2$	6.028***			1.906		

Note. Referent group for Condition = Control.

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Step 2.** Regression analyses revealed a significant interaction between MS and political ideology predicting attitudes toward reformers, without controls ( $B = -0.395$ ,  $\beta = -0.223$ ,  $SE = 0.184$ ,  $t(178) = -2.150$ ,  $p = .033$ ), which became marginally significant when all controls were entered into the model ( $B = -0.330$ ,  $\beta = -0.186$ ,  $SE = 0.171$ ,  $t(174) = -1.928$ ,  $p = .055$ ). The interaction between US and political ideology predicting attitudes towards reformers did not yield significant results without controls ( $B = -0.226$ ,  $\beta = -0.145$ ,  $SE = 0.173$ ,  $t(178) = -1.301$ ,  $p = .195$ ), or with controls ( $B = -0.209$ ,  $\beta = -0.134$ ,  $SE = 0.162$ ,  $t(174) = -1.291$ ,  $p = .198$ ). The control variable of threat thoughts remained

statistically significant in the step 2 control model ( $B = 0.457$ ,  $\beta = 0.469$ ,  $SE = 0.125$ ,  $t(174) = 3.649$ ,  $p < .001$ ). See Tables 20 and 21.

**Simple slopes analyses.** Following up on the significant MS X Political Ideology interaction, the simple slopes for this interaction failed to reach statistical significance either with or without controls for both Liberals and Conservatives. Liberals: without controls; ( $B = -0.169$ ,  $\beta = -0.162$ ,  $SE = 0.123$ ,  $t(178) = -1.378$ ,  $p = .170$ ), and with controls ( $B = -0.173$ ,  $\beta = -0.166$ ,  $SE = 0.115$ ,  $t(174) = -1.506$ ,  $p = .134$ ). Conservatives: without controls; ( $B = 0.266$ ,  $\beta = 0.217$ ,  $SE = 0.130$ ,  $t(178) = 1.738$ ,  $p = .084$ ), and with controls ( $B = 0.156$ ,  $\beta = 0.150$ ,  $SE = 0.123$ ,  $t(174) = 1.273$ ,  $p = .205$ ). See Figure 5.

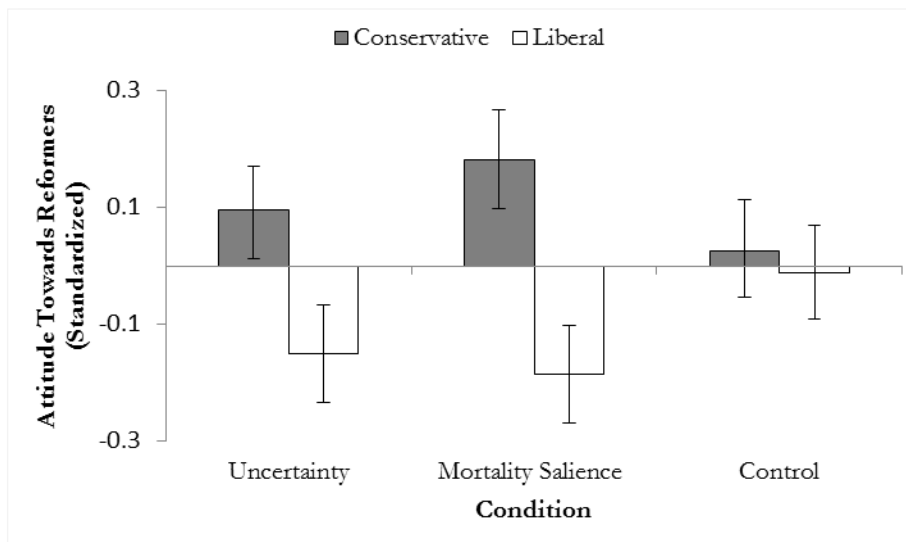


Figure 5. Estimated Marginal Means of Each Condition for the Dependent Variable of Attitudes Towards Reformers, Moderated by Political Ideology, With Controls. Error bars represent  $\pm 1$  standard error from the mean, Study 2.

**Mediated moderation.** Procedures for establishing mediated moderation here are identical to that described previously. Accordingly, the significance of the three equations is as follows:

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \varepsilon_1 p_{MSxB} = .033^* \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \varepsilon_2 p_{MSxB} = .457 \quad (2)$$

$$Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \varepsilon_3 p_{MSxB} = .012^* \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of political ideology, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of attitudes towards reformers. In this case, since it is the MSxB interaction (and not the USxB) interaction which achieved or neared significance), we look only at the  $p$  values corresponding to the MSxB interactions here. In this case, the coefficient of the MSxB interaction of the second equation does not reach statistical significance  $t(178) = -0.75$ ,  $p_{\beta_{MSXB}} = .457$ . and therefore the “initial criteria” for mediated moderation are not met. Furthermore, the relevant coefficient was not nominally reduced in magnitude, disqualifying mediated moderation.

**Social dominance orientation interaction. *Step 1.*** The (a) US and (b) MS dummy codes, in addition to all main effects (and controls where applicable) were entered along with the moderator of social dominance orientation (abbreviated SDO) at step 1. Linear regression results at step 1 revealed no significant effect of US on attitudes toward reformers, ( $B = -0.096$ ,  $\beta = -0.091$ ,  $SE = 0.067$ ,  $t(193) = -1.430$ ,  $p = .154$ ), without controls, ( $B = -0.085$ ,  $\beta = -0.081$ ,  $SE = 0.066$ ,  $t(189) = -1.297$ ,  $p = .196$ ), with all controls), nor for MS ( $B = -0.028$ ,  $\beta = -0.026$ ,  $SE = 0.068$ ,  $t(193) = -0.410$ ,  $p = .682$ ), without controls; ( $B = -0.020$ ,  $\beta = -0.019$ ,  $SE = 0.068$ ,  $t(189) = -0.299$ ,  $p = .765$ ), with all controls (see Tables 22 and 23).

Table 22. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reform Regressed Onto Condition and the Moderator of Social Dominance Orientation, Without Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	-.096	.067	-.091	-.091	.066	-.087
Mortality salience (MS)	-.028	.068	-.026	-.038	.067	-.036
Social dominance orientation (SDO)	.641***	.055	.641	.562***	.095	.562
US * SDO	—	—	—	-.046	.130	-.028
MS * SDO	—	—	—	.327*	.138	.177
Constant	.042	.048	—	.037	.047	—
<i>R</i> <sup>2</sup> ( <i>R</i> <sup>2</sup> Adj)	.414 (.405)			.440 (.425)		
<i>F</i> Change in <i>R</i> <sup>2</sup>	45.449***			4.407*		

Note. Referent group for Condition = Control.

<sup>+</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Table 23. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reform Regressed Onto Condition, the Moderator of Social Dominance Orientation, With Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	-.085	.066	-.081	-.081	.065	-.077
Mortality salience (MS)	-.020	.068	-.019	-.032	.067	-.030
Social dominance orientation (SDO)	.609***	.059	.609	.538***	.097	.538
Death thoughts (DT)	-.093	.082	-.093	-.065	.082	-.065
Anxious thoughts (AT)	.228**	.081	.228	.219**	.080	.219
Insecure thoughts (IT)	-.146	.100	-.146	-.145	.099	-.145
Threat thoughts (TT)	.169	.108	.169	.143	.107	.143
US * SDO	—	—	—	-.032	.127	-.020
MS * SDO	—	—	—	.296*	.136	.160
Constant	.036	.047	—	.032	.047	—
<i>R</i> <sup>2</sup> ( <i>R</i> <sup>2</sup> Adj)	.456 (.436)			.476 (.451)		
<i>F</i> Change in <i>R</i> <sup>2</sup>	22.630***			3.535*		

Note. Referent group for Condition = Control.

<sup>+</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Step 1 revealed a significant main effect of social dominance orientation in the model without controls ( $B = 0.641$ ,  $\beta = 0.641$ ,  $SE = 0.055$ ,  $t(193) = 11.572$ ,  $p < .001$ ), such that participants who were high in social dominance orientation exhibited more negative attitudes towards reformers, and those who were low in social dominance orientation exhibited more positive attitudes towards reformers. When controls were entered into the model, this effect remained significant, ( $B = 0.609$ ,  $\beta = 0.609$ ,  $SE = 0.059$ ,  $t(189) = 10.261$ ,  $p < .001$ , with all controls). The control variable of anxious thoughts was statistically significant in the step 1 control model ( $B = 0.228$ ,  $\beta = 0.228$ ,  $SE = 0.081$ ,  $t(189) = 2.803$ ,  $p = .006$ ), such that increases in anxious thoughts were associated with more negative attitudes towards reformers.

**Step 2.** Regression analyses revealed a significant interaction between MS and social dominance orientation predicting attitudes toward reformers, without controls ( $B = 0.327$ ,  $\beta = 0.177$ ,  $SE = 0.138$ ,  $t(191) = 2.364$ ,  $p = .019$ ), which remained significant when all controls were entered into the model ( $B = 0.296$ ,  $\beta = 0.160$ ,  $SE = 0.136$ ,  $t(187) = 2.167$ ,  $p = .031$ ). The interaction between US and social dominance orientation predicting attitudes towards reformers did not yield significant results without controls ( $B = -0.046$ ,  $\beta = -0.028$ ,  $SE = 0.130$ ,  $t(191) = -0.357$ ,  $p = .722$ ), or with controls ( $B = -0.032$ ,  $\beta = -0.020$ ,  $SE = 0.127$ ,  $t(187) = -0.255$ ,  $p = .799$ ). The control variable of anxious thoughts remained statistically significant in the step 2 control model ( $B = 0.219$ ,  $\beta = 0.219$ ,  $SE = 0.080$ ,  $t(187) = 2.719$ ,  $p = .007$ ). See Tables 24 and 25.



Table 24. Condition Regressed Onto Attitude Towards Reformers for Participants High and Low on Social Domination Orientation, Without Controls, Study 2

Participant group	Uncertainty salience		Mortality salience		Control	
	<i>M</i>	<i>SE M</i>	<i>M</i>	<i>SE M</i>	<i>M</i>	<i>SE M</i>
High social dominance	.204	.064	.444	.065	.318	.071
Low social dominance	-.312	.064	-.445	.073	-.244	.063

Table 25. Condition Regressed Onto Attitude Towards Reformers for Participants High and Low on Social Domination Orientation, With Controls, Study 2

Participant group	Uncertainty salience		Mortality salience		Control	
	<i>M</i>	<i>SE M</i>	<i>M</i>	<i>SE M</i>	<i>M</i>	<i>SE M</i>
High social dominance	.204	.063	.417	.066	.301	.071
Low social dominance	-.301	.065	-.416	.074	-.237	.063

**Simple slopes analyses.** Following up on the significant MS X Social Dominance Orientation interaction, the simple slopes analyses revealed that for those low in social dominance orientation, those primed with mortality salience exhibited more positive attitudes towards reformers without controls ( $B = -0.201$ ,  $\beta = -0.190$ ,  $SE = 0.097$ ,  $t(191) = -2.085$ ,  $p = .038$ ). With controls in the model, the effect reached marginal significance ( $B = -0.179$ ,  $\beta = -0.169$ ,  $SE = 0.096$ ,  $t(187) = -1.860$ ,  $p = .065$ ). Statistical significance was not achieved for participants high in social dominance orientation when primed with mortality salience without controls ( $B = 0.126$ ,  $\beta = 0.119$ ,  $SE = 0.096$ ,  $t(191) = 1.311$ ,  $p = .191$ ), or with controls ( $B = 0.116$ ,  $\beta = 0.110$ ,  $SE = 0.095$ ,  $t(187) = 1.226$ ,  $p = .222$ ). When

primed with mortality salience, participants high in social dominance orientation showcased more negative attitudes towards reformers; while those low in social dominance orientation showcased more positive attitudes towards reformers. See Figure 6.

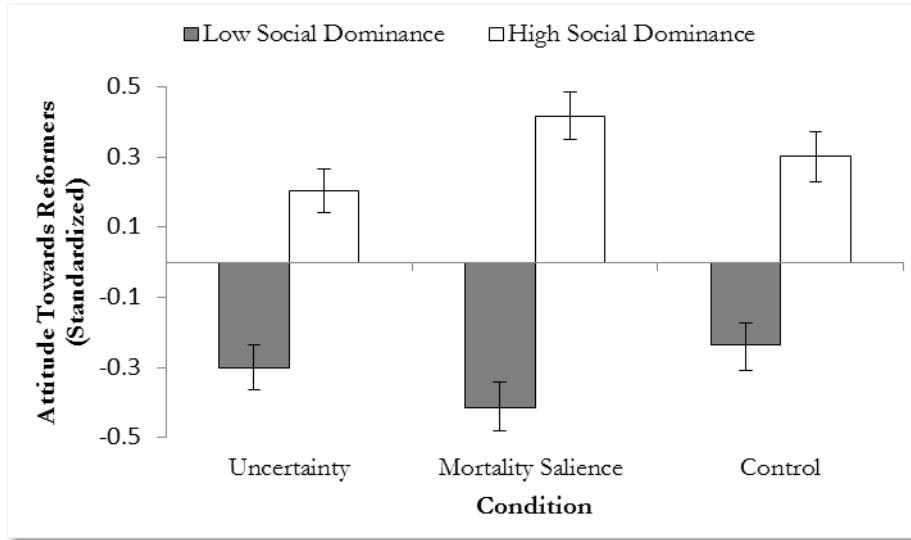


Figure 6. Estimated Marginal Means of Each Condition for the Dependent Variable of Attitudes Towards Reformers, Moderated by Social Dominance Orientation, With Controls. Error bars represent  $\pm 1$  standard error from the mean, Study 2.

**Mediated moderation.** Procedures for establishing mediated moderation here (and throughout) are identical to that described previously. Accordingly, the significance of the three equations is as follows:

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \epsilon_1 p_{MSxB} = .019^* \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \epsilon_2 p_{MSxB} = .582 \quad (2)$$

$$Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \epsilon_3 p_{MSxB} = .020^* \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of

social dominance orientation, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of attitudes towards reformers. In this case, since it is the MSxB interaction (and not the USxB) interaction which achieved or neared significance), we look only at the  $p$  values corresponding to the MSxB interactions here. In this case, the coefficient of the MSXB interaction of the second equation does not reach statistical significance  $t(191) = 0.55$ ,  $p_{\beta_{\text{MSXB}}} = .582$ . and therefore the “initial criteria” for mediated moderation are not met and we cannot proceed further.

**System justification interaction. *Step 1.*** The (a) US and (b) MS dummy codes, in addition to all main effects (and controls where applicable) were entered along with the moderator of system justification (abbreviated SJS) at step 1. Linear regression results at step 1 revealed no significant effect of US on attitudes toward reformers ( $B = 0.009$ ,  $\beta = 0.009$ ,  $SE = 0.082$ ,  $t(193) = 0.113$ ,  $p = .910$ ), without controls, ( $B = 0.014$ ,  $\beta = 0.013$ ,  $SE = 0.079$ ,  $t(189) = 0.172$ ,  $p = .864$ ), with all controls), nor for MS ( $B = 0.102$ ,  $\beta = 0.096$ ,  $SE = 0.082$ ,  $t(193) = 1.243$ ,  $p = .215$ ), without controls; ( $B = 0.064$ ,  $\beta = 0.061$ ,  $SE = 0.081$ ,  $t(189) = 0.792$ ,  $p = .430$ ), with all controls (see Table 26 and 27).

Table 26. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reformers Regressed Onto Condition and the Moderator of System Justification, Without Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	.009	.082	.009	-.011	.080	-.011
Mortality salience (MS)	.102	.082	.096	.110	.080	.104
System justification (SJS)	.383***	.067	.383	.337**	.121	.337
US X SJS	—	—	—	-.185	.158	-.117
MS X SJS	—	—	—	.398*	.169	.218
Constant	-.037	.058	—	-.032	.057	—
$R^2$ ( $R^2$ Adj)	.151 (.138)			.210 (.189)		
$F$ Change in $R^2$	11.447***			7.073**		

Note. Referent group for Condition = Control.

<sup>+</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 27. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reformers Regressed Onto Condition, the Moderator of System Justification, With Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	.014	.079	.013	-.003	.077	-.003
Mortality salience (MS)	.064	.081	.061	.076	.080	.071
System Justification (SJS)	.296***	.068	.296	.273*	.118	.273
Death thoughts (DT)	-.043	.098	-.043	-.035	.095	-.035
Anxious thoughts (AT)	.087	.096	.087	.074	.094	.074
Insecure thoughts (IT)	-.121	.119	-.121	-.130	.116	-.130
Threat thoughts (TT)	.360**	.126	.360	.344**	.123	.344
US X SJS	—	—	—	-.181	.154	-.114
MS X SJS	—	—	—	.339*	.166	.186
Constant	-.026	.056	—	-.024	.056	—
$R^2$ ( $R^2$ Adj)	.231 (.203)			.277 (.242)		
$F$ Change in $R^2$	8.117***			5.897**		

Note. Referent group for Condition = Control.

<sup>+</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Step 1 revealed a significant main effect of system justification in the model without controls ( $B = 0.383$ ,  $\beta = 0.383$ ,  $SE = 0.067$ ,  $t(193) = 5.715$ ,  $p < .001$ ), such that participants who were low in system justification exhibited more positive attitudes towards reformers, and those who were high in system justification exhibited more negative attitudes towards reformers. When controls were entered into the model, this effect remained significant, ( $B = 0.296$ ,  $\beta = 0.296$ ,  $SE = 0.068$ ,  $t(189) = 4.385$ ,  $p < .001$ , with all controls). The control variable of threat thoughts was statistically significant in the step 1 control model ( $B = 0.360$ ,  $\beta = 0.360$ ,  $SE = 0.126$ ,  $t(189) = 2.850$ ,  $p = .005$ ), such that increases in threat thoughts were associated with more negative attitudes towards reformers.

**Step 2.** Regression analyses revealed a significant interaction between the MS and system justification predicting attitudes toward reformers, without controls ( $B = 0.398$ ,  $\beta = 0.218$ ,  $SE = 0.169$ ,  $t(191) = 2.361$ ,  $p = .019$ ), which remained significant when all controls were entered into the model ( $B = 0.339$ ,  $\beta = 0.186$ ,  $SE = 0.186$ ,  $t(187) = 2.047$ ,  $p = .042$ ). The interaction between the US and system justification predicting attitudes towards reformers did not yield significant results without controls ( $B = -0.185$ ,  $\beta = -0.117$ ,  $SE = 0.158$ ,  $t(191) = -1.166$ ,  $p = .245$ ), or with controls ( $B = -0.181$ ,  $\beta = -0.114$ ,  $SE = 0.154$ ,  $t(187) = -1.176$ ,  $p = .241$ ). The control variable of threat thoughts remained statistically significant in the step 2 control model ( $B = 0.344$ ,  $\beta = 0.344$ ,  $SE = 0.123$ ,  $t(187) = 2.795$ ,  $p = .006$ ).

**Simple slopes analyses.** Following up on the MS X System Justification interaction, simple slopes analyses revealed that for those high in system justification,

those primed with mortality salience exhibited more negative attitudes towards reformers ( $B = 0.309, \beta = 0.291, SE = 0.112, t(191) = 2.763, p = .006$ ). With controls in the model, the effect remained significant ( $B = 0.245, \beta = 0.231, SE = 0.111, t(187) = 2.203, p = .029$ ). Statistical significance was not achieved for participants low in system justification when primed with mortality salience, without controls ( $B = -0.089, \beta = -0.084, SE = 0.121, t(191) = -0.739, p = .461$ ); with controls ( $B = -0.094, \beta = -0.088, SE = 0.118, t(187) = -0.793, p = .429$ ). See Figure 7.

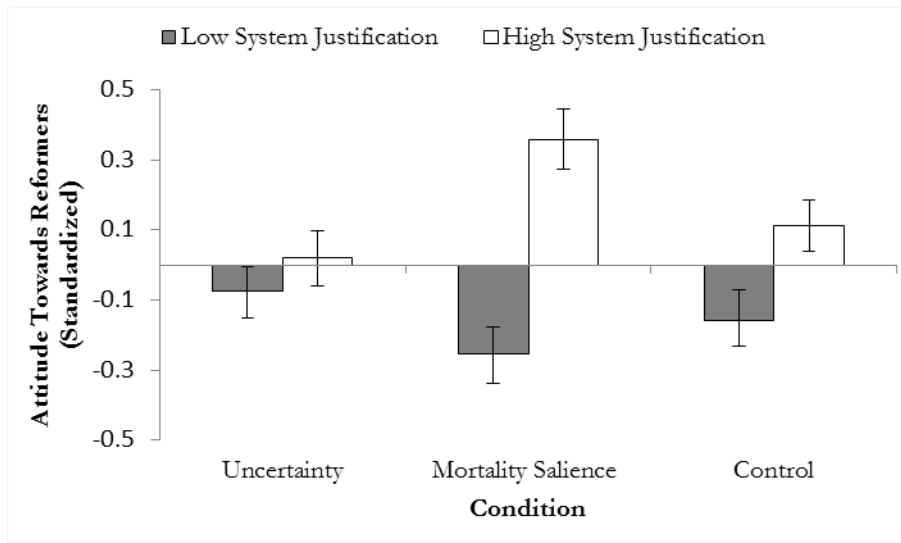


Figure 7. Estimated Marginal Means of Each Condition for the Dependent Variable of Attitudes Towards Reformers, Moderated by System Justification, With Controls. Error bars represent  $\pm 1$  standard error from the mean, Study 2.

**Mediated moderation.** Procedures for establishing mediated moderation here are identical to that described previously. Accordingly, the significance of the three equations is as follows:

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \varepsilon_1 p_{MSxB} = .019^* \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \varepsilon_2 p_{MSxB} = .140 \quad (2)$$

$$Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \varepsilon_3 p_{MSxB} = .048^* \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of system justification, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of attitudes towards reformers. In this case, since it is the MSxB interaction (and not the USxB) interaction which achieved or neared significance), we look only at the  $p$  values corresponding to the MSxB interactions here. In this case, the coefficient of the MSxB interaction of the second equation does not reach statistical significance  $t(191) = 1.48, p_{\beta_{MSxB}} = .140$ . and therefore the “initial criteria” for mediated moderation are not met and we do not proceed further down this line of inquiry.

**Intolerance of uncertainty interaction. Step 1.** The (a) US and (b) MS dummy codes, in addition to all main effects (and controls where applicable) were entered along with the moderator of intolerance of uncertainty (abbreviated IUS) at step 1. Linear regression results at step 1 revealed no significant effect of US on attitudes toward reformers, ( $B = -0.059, \beta = -0.056, SE = 0.084, t(193) = -0.700, p = .485$ ), without controls, ( $B = -0.037, \beta = -0.035, SE = 0.081, t(189) = -0.450, p = .654$ ), with all controls), nor for MS ( $B = 0.042, \beta = 0.040, SE = 0.085, t(193) = 0.501, p = .617$ ), without controls; ( $B = 0.017, \beta = 0.016, SE = 0.084, t(189) = 0.203, p = .839$ ), with all controls (see Tables 28 and 29).

Table 28. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reformers Regressed Onto Condition and the Moderator of Intolerance of Uncertainty, Without Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	-.059	.084	-.056	-.061	.083	-.058
Mortality salience (MS)	.042	.085	.040	.040	.084	.038
Intolerance of uncertainty (IUS)	.272***	.069	.272	.426**	.127	.426
US X IUS	—	—	—	-.378*	.166	-.241
MS X IUS	—	—	—	-.005	.177	-.003
Constant	.006	.060	—	.007	.059	—
<i>R</i> <sup>2</sup> ( <i>R</i> <sup>2</sup> Adj)	.081 (.067)			.115 (.092)		
<i>F</i> Change in <i>R</i> <sup>2</sup>	5.684**			3.662*		

Note. Referent group for Condition = Control.

<sup>+</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Table 29. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reformers Regressed Onto Condition, the Moderator of Intolerance of Uncertainty, With Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	-.037	.081	-.035	-.040	.081	-.038
Mortality salience (MS)	.017	.084	.016	.019	.083	.018
Intolerance of uncertainty (IUS)	.121	.077	.121	.279*	.132	.279
Death thoughts (DT)	-.051	.102	-.051	-.064	.101	-.064
Anxious thoughts (AT)	.063	.103	.063	.033	.103	.033
Insecure thoughts (IT)	-.124	.124	-.124	-.112	.124	-.112
Threat thoughts (TT)	.414**	.133	.414	.404**	.132	.404
US X IUS	—	—	—	-.315+	.164	-.201
MS X IUS	—	—	—	-.045	.173	-.025
Constant	.007	.058	—	.007	.058	—
<i>R</i> <sup>2</sup> ( <i>R</i> <sup>2</sup> Adj)	.164 (.133)			.184 (.144)		
<i>F</i> Change in <i>R</i> <sup>2</sup>	5.292***			2.274		

Note. Referent group for Condition = Control.

<sup>+</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.



Step 1 revealed a significant main effect of intolerance of uncertainty predicting attitudes toward reformers in the model without controls ( $B = 0.272$ ,  $\beta = 0.272$ ,  $SE = 0.069$ ,  $t(193) = 3.937$ ,  $p < .001$ ), such that participants with high levels of intolerance of uncertainty exhibited more negative attitudes towards reformers, and those with low levels of intolerance of uncertainty exhibited more positive attitudes towards reformers. When controls were entered into the model, this effect was not significant, ( $B = 0.121$ ,  $\beta = 0.121$ ,  $SE = 0.077$ ,  $t(189) = 1.573$ ,  $p = .117$ , with all controls). The control variable of threat thoughts was statistically significant in the step 1 control model ( $B = 0.414$ ,  $\beta = 0.414$ ,  $SE = 0.133$ ,  $t(189) = 3.111$ ,  $p = .002$ ), such that increases in threat thoughts were associated with more negative attitudes towards reformers.

**Step 2.** Regression analyses revealed a significant interaction between US and intolerance of uncertainty predicting attitudes toward reformers, without controls ( $B = -0.378$ ,  $\beta = -0.241$ ,  $SE = 0.166$ ,  $t(191) = -2.277$ ,  $p = .024$ ), which became marginally significant when all controls were entered into the model ( $B = -0.315$ ,  $\beta = -0.201$ ,  $SE = 0.164$ ,  $t(187) = -1.926$ ,  $p = .056$ ). The interaction between the MS and intolerance of uncertainty predicting attitudes towards reformers did not yield significant results without controls ( $B = -0.005$ ,  $\beta = -0.003$ ,  $SE = 0.177$ ,  $t(191) = -0.027$ ,  $p = .979$ ), or with controls ( $B = -0.045$ ,  $\beta = -0.025$ ,  $SE = 0.173$ ,  $t(187) = -0.261$ ,  $p = .794$ ). The control variable of threat thoughts remained statistically significant in the step 2 control model ( $B = 0.404$ ,  $\beta = 0.404$ ,  $SE = 0.132$ ,  $t(187) = 3.058$ ,  $p = .003$ ).

**Simple slopes analyses.** Following up on the US X Intolerance of Uncertainty interaction, without controls, simple slopes analyses revealed that for those high in

intolerance of uncertainty, those primed with uncertainty salience exhibited more positive attitudes towards reformers ( $B = -0.249$ ,  $\beta = -0.237$ ,  $SE = 0.118$ ,  $t(191) = -2.115$ ,  $p = .036$ ). With controls in the model, the effect became marginally significant ( $B = -0.198$ ,  $\beta = -0.188$ ,  $SE = 0.116$ ,  $t(187) = -1.702$ ,  $p = .090$ ). Statistical significance was not achieved for participants low in intolerance of uncertainty when primed with uncertainty salience without controls ( $B = 0.128$ ,  $\beta = 0.122$ ,  $SE = 0.117$ ,  $t(191) = 1.099$ ,  $p = .273$ ), or with controls ( $B = 0.117$ ,  $\beta = 0.112$ ,  $SE = 0.114$ ,  $t(187) = 1.031$ ,  $p = .304$ ). See Figure 8.

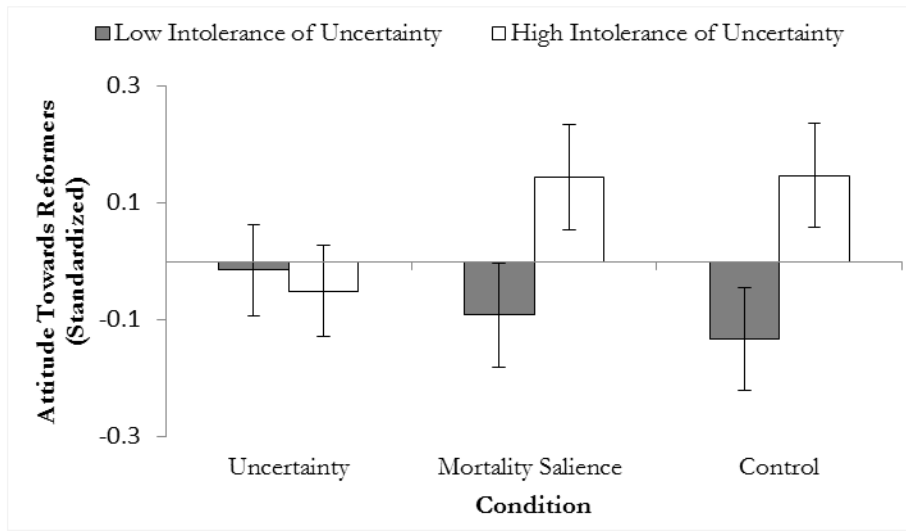


Figure 8. Estimated Marginal Means of Each Condition for the Dependent Variable of Attitudes Towards Reformers, Moderated by Intolerance of Uncertainty Scale, With Controls. Error bars represent  $\pm 1$  standard error from the mean, Study 2.

**Mediated moderation.** Procedures for establishing mediated moderation here (and throughout) are identical to that described previously. Accordingly, the significance of the three equations is as follows:

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \varepsilon_1 p_{USxB} = .024^* \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \varepsilon_2 p_{USxB} = .184 \quad (2)$$

$$Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \varepsilon_3 p_{USxB} = .007^{**} \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of intolerance of uncertainty, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of attitudes towards reformers. In this case, since it is the USxB interaction (and not the MSxB) interaction which achieved or neared significance, we look only at the  $p$  values corresponding to the USxB interactions here. In this case, the coefficient of the USxB interaction of the second equation does not reach statistical significance  $t(191) = -1.33$ ,  $p_{\beta_{USXB}} = .184$ . and therefore the “initial criteria” for mediated moderation are not met. Furthermore, the relevant coefficient was not nominally reduced in magnitude, disqualifying mediated moderation.

**Political self-efficacy interaction. Step 1.** The (a) US and (b) MS dummy codes, in addition to all main effects (and controls where applicable) were entered along with the moderator of political self-efficacy (abbreviated PSE) at step 1. Linear regression results at step 1 revealed no significant effect of US on attitudes toward reformers, ( $B = -0.046$ ,  $\beta = -0.044$ ,  $SE = 0.087$ ,  $t(193) = -0.528$ ,  $p = .598$ ), without controls, ( $B = -0.034$ ,  $\beta = -0.033$ ,  $SE = 0.082$ ,  $t(189) = -0.417$ ,  $p = .677$ ), with all controls), nor for MS ( $B = 0.039$ ,  $\beta = 0.037$ ,  $SE = 0.087$ ,  $t(193) = 0.448$ ,  $p = .655$ ), without controls; ( $B = 0.014$ ,  $\beta = 0.013$ ,  $SE = 0.084$ ,  $t(189) = 0.168$ ,  $p = .866$ ), with all controls (see Tables 30 and 31).

Table 30. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reformers Regressed Onto Condition and the Moderator of Political Self-Efficacy, Without Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	-.046	.087	-.044	-.063	.086	-.060
Mortality salience (MS)	.039	.087	.037	.040	.087	.038
Political self-efficacy (PSE)	.128 <sup>+</sup>	.072	.128	.354**	.125	.354
US X PSE	—	—	—	.471**	.176	-.270
MS X PSE	—	—	—	-.204	.173	-.121
Constant	.003	.062	—	.000	.061	—
<i>R</i> <sup>2</sup> ( <i>R</i> <sup>2</sup> Adj)	.024 (.008)			.059 (.035)		
<i>F</i> Change in <i>R</i> <sup>2</sup>	1.553			3.613*		

Note. Referent group for Condition = Control.

<sup>+</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Table 31. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reformers Regressed Onto Condition, the Moderator of Political Self-Efficacy, With Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	-.034	.082	-.033	-.052	.081	-.049
Mortality salience (MS)	.014	.084	.013	.022	.083	.020
Political self-efficacy (PSE)	-.020	.073	-.020	.234 <sup>+</sup>	.121	.234
Death thoughts (DT)	-.059	.102	-.059	-.090	.101	-.090
Anxious thoughts (AT)	.103	.101	.103	.118	.099	.118
Insecure thoughts (IT)	-.143	.124	-.143	-.137	.123	-.137
Threat thoughts (TT)	.471***	.132	.471	.478***	.131	.478
US X PSE	—	—	—	-.487**	.166	-.279
MS X PSE	—	—	—	-.266	.165	-.158
Constant	.007	.058	—	.004	.057	—
<i>R</i> <sup>2</sup> ( <i>R</i> <sup>2</sup> Adj)	.153 (.122)			.191 (.152)		
<i>F</i> Change in <i>R</i> <sup>2</sup>	4.888***			4.313*		

Note. Referent group for Condition = Control.

<sup>+</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Step 1 revealed a marginally significant main effect of political self-efficacy predicting attitudes toward reformers in the model without controls ( $B = 0.128$ ,  $\beta = 0.128$ ,  $SE = 0.072$ ,  $t(193) = 1.788$ ,  $p = .075$ ), such that participants with high levels of political self-efficacy exhibited more negative attitudes towards reformers, and those with low levels of political self-efficacy exhibited more positive attitudes towards reformers. When controls were entered into the model, this effect was not significant, ( $B = -0.020$ ,  $\beta = -0.020$ ,  $SE = 0.073$ ,  $t(189) = -0.273$ ,  $p = .785$ , with all controls). The control variable of threat thoughts was statistically significant in the step 1 control model ( $B = 0.471$ ,  $\beta = 0.471$ ,  $SE = 0.132$ ,  $t(189) = 3.554$ ,  $p < .001$ ), such that increases in threat thoughts were associated with more negative attitudes towards reformers.

**Step 2.** Regression analyses revealed a significant US by political self-efficacy interaction predicting attitudes toward reformers, without controls ( $B = -0.471$  (Yes, this coefficient is also .471, not a typo),  $\beta = -0.270$ ,  $SE = 0.176$ ,  $t(191) = -2.678$ ,  $p = .008$ ), which remained significant when all controls were entered into the model ( $B = -0.487$ ,  $\beta = -0.279$ ,  $SE = 0.166$ ,  $t(187) = -2.934$ ,  $p = .004$ ). The interaction between MS and political self-efficacy predicting attitudes towards reformers did not yield significant results without controls ( $B = -0.204$ ,  $\beta = -0.121$ ,  $SE = 0.173$ ,  $t(191) = -1.180$ ,  $p = .239$ ), or with controls ( $B = -0.266$ ,  $\beta = -0.158$ ,  $SE = 0.165$ ,  $t(187) = -1.617$ ,  $p = .108$ ). The control variable of threat thoughts remained statistically significant in the step 2 control model ( $B = 0.478$ ,  $\beta = 0.478$ ,  $SE = 0.131$ ,  $t(187) = 3.661$ ,  $p < .001$ ).

**Simple slopes analyses.** Following up on the US X Political Self-Efficacy interaction, without controls, simple slopes analyses revealed that for those high in

political self-efficacy, those primed with uncertainty salience exhibited more positive/less negative attitudes towards reformers ( $B = -0.299$ ,  $\beta = -0.284$ ,  $SE = 0.127$ ,  $t(191) = -2.346$ ,  $p = .020$ ). With controls in the model, the effect remained significant ( $B = -0.295$ ,  $\beta = -0.280$ ,  $SE = 0.120$ ,  $t(187) = -2.454$ ,  $p = .015$ ). Statistical significance was not achieved for participants low in political self-efficacy when primed with uncertainty salience without controls ( $B = 0.172$ ,  $\beta = 0.164$ ,  $SE = 0.119$ ,  $t(191) = 1.452$ ,  $p = .148$ ), and was marginally significant with controls ( $B = 0.192$ ,  $\beta = 0.182$ ,  $SE = 0.111$ ,  $t(187) = 1.720$ ,  $p = .087$ ). See Figure 9.

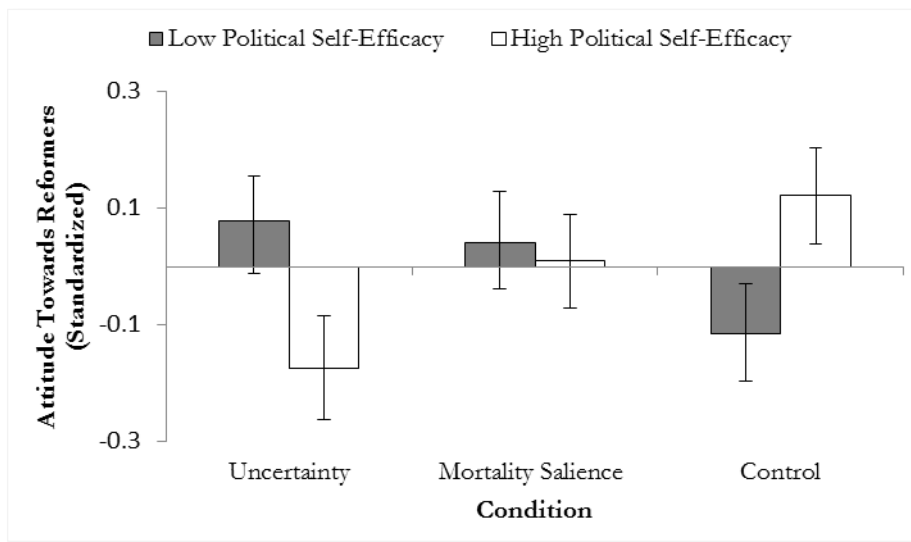


Figure 9. Estimated Marginal Means of Each Condition for the Dependent Variable of Attitude Towards Reformers, Moderated by Political Self-Efficacy, With Controls. Error bars represent  $\pm 1$  standard error from the mean, Study 2.

**Mediated moderation.** Procedures for establishing mediated moderation here (and throughout) are identical to that described previously. Accordingly, the significance of the three equations is as follows:

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \varepsilon_1 p_{USxB} = .008^{**} \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \varepsilon_2 p_{USxB} = .969 \quad (2)$$

$$Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \varepsilon_3 p_{USxB} = .005^{**} \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of political self-efficacy, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of attitudes towards reformers. In this case, since it is the USxB interaction (and not the MSxB) interaction which achieved or neared significance), we look only at the  $p$  values corresponding to the USxB interactions here. In this case, the coefficient of the USXB interaction of the second equation does not reach statistical significance  $t(191) = -0.04$ ,  $p_{\beta_{USXB}} = .969$ , and therefore the “initial criteria” for mediated moderation are not met. Furthermore, the relevant coefficient was not nominally reduced in magnitude, disqualifying mediated moderation.

**Trust in government interaction. Step 1.** The (a) US and (b) MS dummy codes, in addition to all main effects (and controls where applicable) were entered along with the moderator of trust in government (abbreviated TG) at step 1. Linear regression results at step 1 revealed no significant effect of uncertainty condition versus the control dummy code on attitudes toward reformers, ( $B = -0.018$ ,  $\beta = -0.017$ ,  $SE = 0.088$ ,  $t(193) = -0.023$ ,  $p = .839$ ), without controls, ( $B = -0.016$ ,  $\beta = -0.015$ ,  $SE = 0.083$ ,  $t(189) = -0.189$ ,  $p = .851$ ), with all controls), nor for the mortality salience versus control dummy code ( $B = 0.060$ ,  $\beta = 0.057$ ,  $SE = 0.087$ ,  $t(193) = 0.694$ ,  $p = .488$ ), without controls; ( $B = 0.025$ ,  $\beta = 0.024$ ,  $SE = 0.084$ ,  $t(189) = 0.296$ ,  $p = .768$ ), with all controls (see Tables 32 and 33).

Table 32. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reformers Regressed Onto Condition and the Moderator of Trust in Government, Without Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	-.018	.088	-.017	-.033	.087	-.032
Mortality salience (MS)	.060	.087	.057	.075	.086	.070
Trust in government (TG)	.177*	.072	.177	.348**	.122	.348
US X TG	—	—	—	-.438*	.171	-.259
MS X TG	—	—	—	-.059	.176	-.033
Constant	-.014	.062	—	-.031	.062	—
$R^2$ ( $R^2$ Adj)	.038 (.023)			.075 (.051)		
$F$ Change in $R^2$	2.522+			3.843*		

Note. Referent group for Condition = Control.

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 33. Hierarchical Multiple Linear Regression Analysis for Attitude Towards Reformers Regressed Onto Condition, the Moderator of Trust in Government, With Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	-.016	.083	-.015	-.028	.082	-.026
Mortality salience (MS)	.025	.084	.024	.045	.084	.043
Trust in government (TG)	.086	.071	.086	.262*	.118	.262
Death thoughts (DT)	-.074	.102	-.074	-.095	.102	-.095
Anxious thoughts (AT)	.098	.100	.098	.113	.099	.113
Insecure thoughts (IT)	-.135	.124	-.135	-.132	.123	-.132
Threat thoughts (TT)	.448**	.130	.448	.435**	.130	.435
US X TG	—	—	—	-.403*	.163	-.238
MS X TG	—	—	—	-.096	.170	-.053
Constant	-.003	.059	—	-.022	.059	—
$R^2$ ( $R^2$ Adj)	.159 (.128)			.188 (.149)		
$F$ Change in $R^2$	5.124***			3.316*		

Note. Referent group for Condition = Control.

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .



Step 1 revealed a significant main effect of trust in government predicting attitudes toward reformers in the model without controls ( $B = 0.177$ ,  $\beta = 0.177$ ,  $SE = 0.072$ ,  $t(193) = 2.466$ ,  $p = .015$ ), such that participants with high levels of trust in government exhibited more negative attitudes towards reformers, and those with low levels of trust in government exhibited more positive attitudes towards reformers. When controls were entered into the model, this effect was not significant, ( $B = 0.086$ ,  $\beta = 0.086$ ,  $SE = 0.071$ ,  $t(189) = 1.214$ ,  $p = .226$ , with all controls). The control variable of threat thoughts was statistically significant in the step 1 control model ( $B = 0.448$ ,  $\beta = 0.448$ ,  $SE = 0.130$ ,  $t(189) = 3.444$ ,  $p = .001$ ), such that increases in threat thoughts were associated with more negative attitudes towards reformers.

**Step 2.** Regression analyses revealed a significant interaction between US and trust in government predicting attitudes toward reformers, without controls ( $B = -0.438$ ,  $\beta = -0.259$ ,  $SE = 0.171$ ,  $t(191) = -2.559$ ,  $p = .011$ ), which remained significant when all controls were entered into the model ( $B = -0.403$ ,  $\beta = -0.238$ ,  $SE = 0.163$ ,  $t(187) = -2.466$ ,  $p = .015$ ). The interaction between MS and trust in government predicting attitudes towards reformers did not yield significant results without controls ( $B = -0.059$ ,  $\beta = -0.033$ ,  $SE = 0.176$ ,  $t(191) = -0.338$ ,  $p = .736$ ), or with controls ( $B = -0.096$ ,  $\beta = -0.053$ ,  $SE = 0.170$ ,  $t(187) = -0.568$ ,  $p = .571$ ). The control variable of threat thoughts remained statistically significant in the step 2 control model ( $B = 0.435$ ,  $\beta = 0.435$ ,  $SE = 0.130$ ,  $t(187) = 3.360$ ,  $p = .001$ ).

**Simple slopes analyses.** Following up on the US X Trust in Government interaction, without controls, simple slopes analyses revealed that for those high in trust

in government, those primed with uncertainty salience exhibited more positive attitudes towards reformers ( $B = -0.252$ ,  $\beta = -0.240$ ,  $SE = 0.123$ ,  $t(191) = -2.049$ ,  $p = .042$ ). With controls in the model, the effect became marginally significant ( $B = -0.229$ ,  $\beta = -0.218$ ,  $SE = 0.117$ ,  $t(187) = -1.951$ ,  $p = .053$ ). Statistical significance was not achieved for participants low in trust in government when primed with uncertainty salience without controls ( $B = 0.185$ ,  $\beta = 0.176$ ,  $SE = 0.121$ ,  $t(191) = 1.535$ ,  $p = .126$ ), or with controls ( $B = 0.174$ ,  $\beta = 0.165$ ,  $SE = 0.115$ ,  $t(187) = 1.514$ ,  $p = .132$ ). See Figure 10.

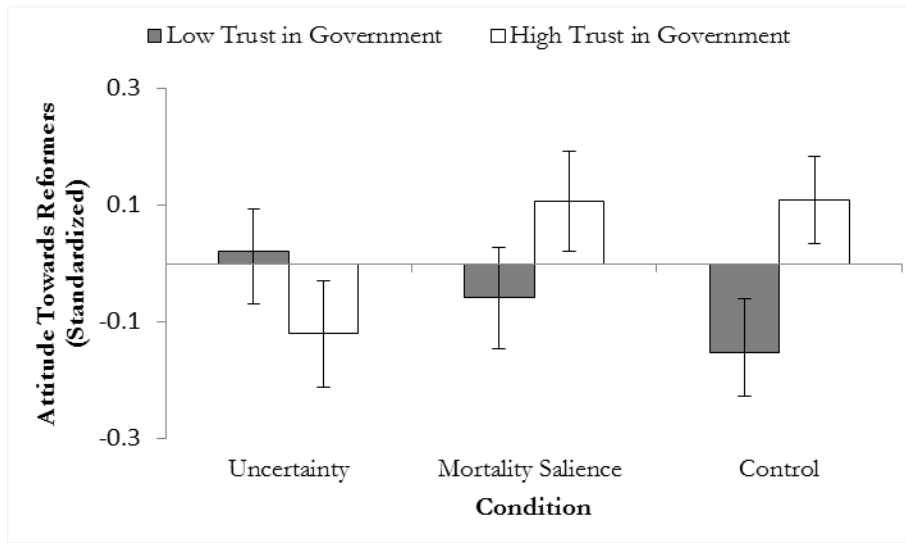


Figure 10. Estimated Marginal Means of Each Condition for the Dependent Variable of Attitudes Towards Reformers, Moderated by Trust in Government, With Controls. Error bars represent  $\pm 1$  standard error from the mean, Study 2.

**Mediated moderation.** Procedures for establishing mediated moderation here (and throughout) are identical to that described previously. Accordingly, the significance of the three equations is as follows:

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \varepsilon_1 p_{USxB} = .011^* \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \varepsilon_2 p_{USxB} = .436 \quad (2)$$

$$Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \varepsilon_3 p_{USxB} = .022^* \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of trust in government, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of attitudes towards reformers. In this case, since it is the USxB interaction (and not the MSxB) interaction which achieved or neared significance, we look only at the  $p$  values corresponding to the USxB interactions here. In this case, the coefficient of the USXB interaction of the second equation does not reach statistical significance  $t(191) = -0.78$ ,  $p_{\beta_{USXB}} = .436$ . and therefore the “initial criteria” for mediated moderation are not met.

### Predicting Support for Regime Change

**Belief in a just world interaction. Step 1.** The (a) US and (b) MS dummy codes, in addition to all main effects (and controls where applicable) were entered along with the moderator of belief in a just world (abbreviated BJW) at step 1. Linear regression results at step 1 revealed no significant effect of US on regime change, ( $B = 0.061$ ,  $\beta = 0.058$ ,  $SE = 0.089$ ,  $t(193) = 0.692$ ,  $p = .490$ ), without controls, ( $B = 0.067$ ,  $\beta = 0.063$ ,  $SE = 0.089$ ,  $t(189) = 0.744$ ,  $p = .458$ ), with all controls), nor for MS ( $B = -0.009$ ,  $\beta = -0.008$ ,  $SE = 0.088$ ,  $t(193) = -0.097$ ,  $p = .923$ ), without controls; ( $B = -0.015$ ,  $\beta = -0.014$ ,  $SE = 0.091$ ,  $t(189) = -0.161$ ,  $p = .872$ ), with all controls (see Tables 34 and 35). Step 1 did not include a significant main effect of belief in a just world predicting regime change in the model

without controls ( $B = -0.005$ ,  $\beta = -0.005$ ,  $SE = 0.073$ ,  $t(193) = -0.064$ ,  $p = .949$ ). When controls were entered into the model, this effect remained non-significant, ( $B = -0.006$ ,  $\beta = -0.006$ ,  $SE = 0.077$ ,  $t(189) = 0.074$ ,  $p = .941$ , with all controls).

Table 34. Hierarchical Multiple Linear Regression Analysis for Regime Change Regressed Onto Condition and the Moderator of Belief in a Just World, Without Controls, Study 2

Variable	Step 1			Step 2		
	$B$	$SE\ B$	$\beta$	$B$	$SE\ B$	$\beta$
Uncertainty salience (US)	.061	.089	.058	.042	.087	.040
Mortality salience (MS)	-.009	.088	-.008	.001	.087	.001
Belief in a just world (BJW)	-.005	.073	-.005	.158	.130	.158
US X BJW	—	—	—	-.481**	.174	-.295
MS X BJW	—	—	—	.058	.180	.033
Constant	-.018	.063	—	-.032	.062	—
$R^2$ ( $R^2$ Adj)	.004 (-.011)			.064 (.040)		
$F$ Change in $R^2$	.261			6.159**		

Note. Referent group for Condition = Control.

<sup>+</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Step 2.** Regression analyses revealed a significant interaction between US and belief in a just world predicting regime change, without controls ( $B = -0.481$ ,  $\beta = -0.295$ ,  $SE = 0.174$ ,  $t(191) = -2.772$ ,  $p = .006$ ), which remained significant when all controls were entered into the model ( $B = -0.487$ ,  $\beta = -0.299$ ,  $SE = 0.176$ ,  $t(187) = -2.763$ ,  $p = .006$ ). The interaction between MS and belief in a just world predicting regime change did not yield significant results without controls ( $B = 0.058$ ,  $\beta = 0.033$ ,  $SE = 0.180$ ,  $t(191) = 0.322$ ,  $p = .748$ ), or with controls ( $B = 0.070$ ,  $\beta = 0.039$ ,  $SE = 0.183$ ,  $t(187) = 0.383$ ,  $p = .702$ ).

Table 35. Hierarchical Multiple Linear Regression Analysis for Regime Change Regressed Onto Condition, the Moderator of Belief on a Just World, With Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	.067	.089	.063	.047	.087	.044
Belief in a just world (BJW)	-.015	.091	-.014	< .001	.090	.000
System Justification (SJS)	.006	.077	.006	.173	.134	.173
Death thoughts (DT)	.115	.111	.115	.107	.108	.107
Anxious thoughts (AT)	.033	.108	.033	.053	.106	.053
Insecure thoughts (IT)	-.052	.134	-.052	-.062	.131	-.062
Threat thoughts (TT)	-.109	.142	-.109	-.130	.138	-.130
US X BJW	—	—	—	-.487**	.176	-.299
MS X BJW	—	—	—	.070	.183	.039
Constant	-.018	.064	—	-.034	.063	—
<i>R</i> <sup>2</sup> ( <i>R</i> <sup>2</sup> Adj)	.013 (-.023)			.076 (.031)		
<i>F</i> Change in <i>R</i> <sup>2</sup>	.358			6.353**		

Note. Referent group for Condition = Control.

<sup>†</sup>*p* < .10. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

**Simple slopes analyses.** Following up on the US X Belief in a Just World interaction, without controls, simple slopes analyses revealed that for those with a lower belief in a just world, those primed with uncertainty salience exhibited a greater support for regime change ( $B = 0.283$ ,  $\beta = 0.269$ ,  $SE = 0.123$ ,  $t(191) = 2.298$ ,  $p = .023$ ). With controls in the model, the effect was also statistically significant ( $B = 0.290$ ,  $\beta = 0.276$ ,  $SE = 0.124$ ,  $t(187) = 2.334$ ,  $p = .021$ ). Statistical significance was not achieved for those with a stronger belief in a just world primed with uncertainty salience without controls ( $B = -0.198$ ,  $\beta = -0.188$ ,  $SE = 0.122$ ,  $t(191) = -1.619$ ,  $p = .107$ ), or with controls ( $B = -0.197$ ,  $\beta = -0.187$ ,  $SE = 0.124$ ,  $t(187) = -1.586$ ,  $p = .114$ ). See Figure 11.

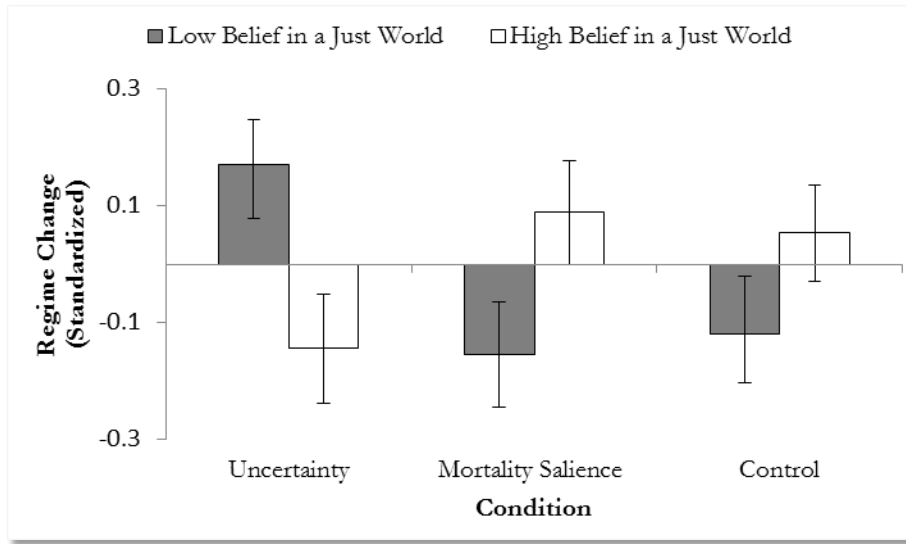


Figure 11. Estimated Marginal Means of Each Condition for the Dependent Variable of Regime Change, Moderated by Belief in a Just World, With Controls. Error bars represent  $\pm 1$  standard error from the mean, Study 2.

**Mediated moderation.** Procedures for establishing mediated moderation here (and throughout) are identical to that described previously. Accordingly, the significance of the three equations is as follows:

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \varepsilon_1 p_{USxB} = .006^{**} \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \varepsilon_2 p_{USxB} = .527 \quad (2)$$

$$Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \varepsilon_3 p_{USxB} = .012^* \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of belief in a just world, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of regime change. In this case, since it is the USxB interaction (and not the MSxB) interaction which achieved or neared significance, we look only at the  $p$  values corresponding to the USxB interactions here. In this case, the coefficient of the USxB

interaction of the second equation does not reach statistical significance  $t(191) = 0.63, p_{\beta}$   $USXB = .527$ . and therefore the “initial criteria” for mediated moderation are not met.

**Trust in government interaction. Step 1.** The two condition dummy codes of (a) uncertainty versus control and (b) mortality salience versus control, were entered along with trust in government at step 1, as were controls. Linear regression results at step 1 revealed no significant effect of uncertainty condition versus the control dummy code on regime change, ( $B = 0.056, \beta = 0.054, SE = 0.089, t(193) = 0.634, p = .527$ ), without controls, ( $B = 0.060, \beta = 0.057, SE = 0.090, t(189) = 0.673, p = .502$ ), with all controls), nor for the mortality salience versus control dummy code ( $B = -0.010, \beta = -0.010, SE = 0.088, t(193) = -0.115, p = .908$ ), without controls; ( $B = -0.019, \beta = -0.018, SE = 0.091, t(189) = -0.203, p = .839$ ), with all controls (see Tables 36 and 37).

Table 36. Hierarchical Multiple Linear Regression Analysis for Regime Change Regressed Onto Condition and the Moderator of Trust in Government, Without Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	.056	.089	.054	.043	.089	.041
Mortality salience (MS)	-.010	.088	-.010	.001	.088	.001
Trust in government (TG)	-.026	.073	-.026	.108	.125	.108
US X TG	—	—	—	-.351*	.175	-.208
MS X TG	—	—	—	-.036	.180	-.020
Constant	-.016	.063	—	-.029	.063	—
$R^2$ ( $R^2$ Adj)	.005 (-.011)			.029 (.004)		
$F$ Change in $R^2$	.302			2.421+		

Note. Referent group for Condition = Control.

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Table 37. Hierarchical Multiple Linear Regression Analysis for Regime Change Regressed Onto Condition, the Moderator of Trust in Government, With Controls, Study 2

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Uncertainty salience (US)	.060	.090	.057	.047	.090	.044
Mortality salience (MS)	-.019	.091	-.018	-.002	.091	-.002
Trust in Government (TG)	-.026	.077	-.026	.115	.128	.115
Death thoughts (DT)	.119	.111	.119	.098	.111	.098
Anxious thoughts (AT)	.034	.109	.034	.046	.108	.046
Insecure thoughts (IT)	-.054	.134	-.054	-.054	.134	-.054
Threat thoughts (TT)	-.103	.141	-.103	-.111	.141	-.111
US X TG	—	—	—	-.354*	.178	-.209
MS X TG	—	—	—	-.040	.185	-.022
Constant	-.014	.064	—	-.030	.064	—
<i>R</i> <sup>2</sup> ( <i>R</i> <sup>2</sup> Adj)	.014 (-.023)			.038 (-.008)		
<i>F</i> Change in <i>R</i> <sup>2</sup>	.374			2.368+		

Note. Referent group for Condition = Control.

+ $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Step 1 did not include a significant main effect of trust in government predicting regime change in the model without controls ( $B = -0.026$ ,  $\beta = -0.026$ ,  $SE = 0.073$ ,  $t(193) = -0.354$ ,  $p = .724$ ). When controls were entered into the model, this effect remained non-significant, ( $B = -0.026$ ,  $\beta = -0.026$ ,  $SE = 0.077$ ,  $t(189) = -0.337$ ,  $p = .736$ , with all controls).

**Step 2.** Regression analyses revealed a significant interaction between the uncertainty salience condition dummy code and trust in government predicting regime change, without controls ( $B = -0.351$ ,  $\beta = -0.208$ ,  $SE = 0.175$ ,  $t(191) = -2.005$ ,  $p = .046$ ), which remained significant when all controls were entered into the model ( $B = -0.354$ ,  $\beta = -0.209$ ,  $SE = 0.178$ ,  $t(187) = -1.992$ ,  $p = .048$ ). The interaction between the mortality



salience dummy code and trust in government predicting regime change did not yield significant results without controls ( $B = -0.036$ ,  $\beta = 0.020$ ,  $SE = 0.180$ ,  $t(191) = -0.202$ ,  $p = .840$ ), or with controls ( $B = -0.040$ ,  $\beta = -0.022$ ,  $SE = 0.185$ ,  $t(187) = -0.216$ ,  $p = .829$ ).

**Simple slopes analyses.** Following up on the Uncertainty Salience X Trust in Government interaction; for those low in trust of government, being primed with uncertainty causes an increase in support for regime change, without controls, ( $B = 0.219$ ,  $\beta = 0.208$ ,  $SE = 0.124$ ,  $t(191) = 1.768$ ,  $p = .079$ ). With controls in the model, the effect remained marginally significant ( $B = 0.224$ ,  $\beta = 0.213$ ,  $SE = 0.125$ ,  $t(187) = 1.793$ ,  $p = .075$ ). Statistical significance was not achieved for those with a stronger trust in government primed with uncertainty salience without controls ( $B = -0.133$ ,  $\beta = -0.126$ ,  $SE = 0.126$ ,  $t(191) = -1.051$ ,  $p = .295$ ), or with controls ( $B = -0.130$ ,  $\beta = -0.124$ ,  $SE = 0.128$ ,  $t(187) = -1.019$ ,  $p = .309$ ). See Figure 12.

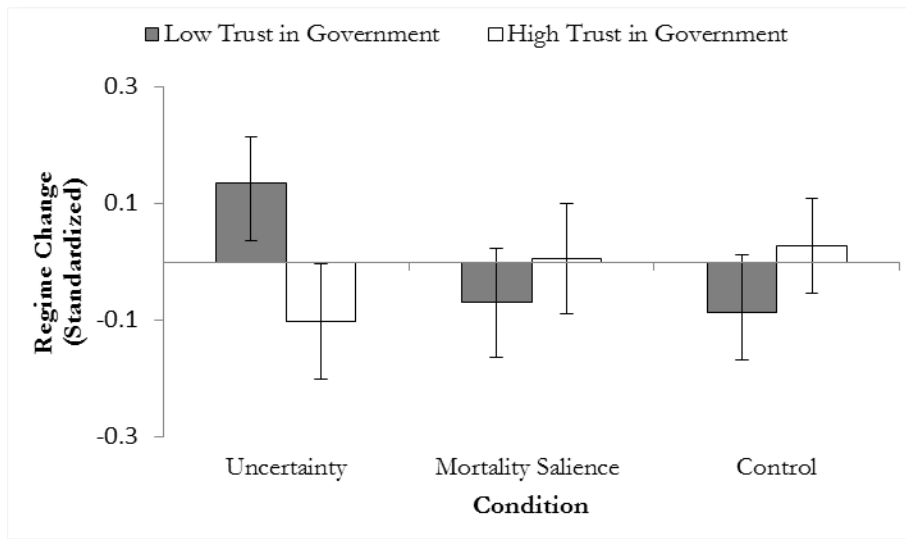


Figure 12. Estimated Marginal Means of Each Condition for the Dependent Variable of Regime Change, Moderated by Trust in Government, With Controls. Error bars represent  $\pm 1$  standard error from the mean, Study 2.

**Mediated moderation.** Basic criteria for establishing mediated moderation are identical to that described previously, as set by Muller et al. (2005), Bucy & Tao (2007). Accordingly, the significance of the three equations is as follows:

$$Y = \beta_{10} + \beta_{US11} + \beta_{MS12} + \beta_{B13} + \beta_{USxB14} + \beta_{MSxB15} + \varepsilon_1 p_{USxB} = .046^* \quad (1)$$

$$M = \beta_{20} + \beta_{US21} + \beta_{MS22} + \beta_{B23} + \beta_{USxB24} + \beta_{MSxB25} + \varepsilon_2 p_{USxB} = .436 \quad (2)$$

$$Y = \beta_{30} + \beta_{US31} + \beta_{MS32} + \beta_{B33} + \beta_{USxB34} + \beta_{MSxB35} + \beta_M + \beta_{MB} + \varepsilon_3 p_{USxB} = .062 \quad (3)$$

Where “US” denotes the independent variable of uncertainty salience, “MS” denotes the independent variable of mortality salience, “B” denotes the moderator of trust in government, “M” denotes the mediator of threat, and “Y” denotes the dependent variable of regime change. In this case, since it is the USxB interaction (and not the MSxB) interaction which achieved or neared significance, we look only at the  $p$  values corresponding to the USxB interactions here. In this case, the coefficient of the USxB interaction of the second equation does not reach statistical significance  $t(191) = -0.78$ ,  $p_{\beta_{USXB}} = .436$ , and therefore the “initial criteria” for mediated moderation are not met. Furthermore, the relevant coefficient was not nominally reduced in magnitude, disqualifying mediated moderation as a possibility.

## **CHAPTER SEVEN**

### **DISCUSSION**

#### **Hypothesis 1**

Hypothesis 1(H1) posited that heightened uncertainty salience, independent of other factors, would cause participants to exhibit an increased preference for the status quo and related constructs. Contrary to expectations, the predicted main effects of uncertainty and mortality salience on status quo preference, attitudes towards reformers, and support for regime change, did not emerge in either study.

#### **Hypothesis 2**

In all cases discussed hereafter, the words “higher” and “more” are spoken with reference to the significant effects in the primed condition of interest, compared with the control. Hypothesis 2(H2) as described previously denotes a set of hypotheses broken down into three parts. The Basic premise of Hypothesis 2 posits that heightened affective experiences (as caused by the US and MS primes, but initially predicted a-priori primarily for US) interacting with a set of selected moderating factors, would cause participants to exhibit an increased preference for the status quo and related constructs in a multiplicative manner (producing interaction effects). The three sets of Hypotheses 2(x, y, z) represent the unique effects predicted for the different conceptual categories of moderators used in this study, with Hypothesis 2(x) denoting individual differences in

uncertainty sensitivity, H2(y) denoting differences in system justifying attitudes and worldviews, and H2(z) denoting differences in non-ideological sociopolitical factors.

**H2(x).** With respect to Hypothesis 2(x), the only statistically significant effect occurred in Study 2, with a significant US x IUS (intolerance of uncertainty scale) interaction (though this effect dropped to marginal significance when controls were entered into the model). The effect was such that in the uncertainty condition, those highly intolerant of uncertainty exhibited heightened positive attitudes towards reformers compared to baseline. This effect did not emerge in study 1, was not predicted, and so any discussion of this effect is merely post-hoc speculation. Our theoretical model predicts that if such an interaction were to occur, those who are intolerant of uncertainty should exhibit more *negative* attitudes towards reformers. More research is needed to determine whether or not this effect is replicable, or a statistical artifact. In any case, Hypothesis 2(x) did not garner evidence in its favor.

**H2(y).** Hypothesis 2(y) predicted that variables related to *system justifying attitudes and worldviews* would moderate the effects of H1 in such a way that those high on system justifying worldviews should exhibit, under priming conditions, a magnification/polarization of baseline attitudinal preferences, sometimes referred to in the literature as an “extremity effect.” This in contrast to an effect such as a “conservative shift,” which predicts attitudinal preferences pushed in one specific direction.

Let us examine the following significance effects which emerged, each which speak to Hypothesis 2(y). A persistent pattern was found across studies, showcased most clearly with the regression model using political ideology (PIDEO) as the moderator and

attitudes towards reformers. In both experiments, political ideology interacted with experimentally manipulated conditions to predict attitudes towards reformers in an identical fashion, establishing the consistency of this effect across multiple priming methods (see Figure 1, compare to Figure 5). As expected, both with and without controls, political ideology predicted attitudes towards reformers such that liberals exhibited heightened positive attitudes towards reformers under conditions of mortality salience. The nature and direction of this effect was predicted a-priori, though it was expected to occur to a larger degree in the uncertainty condition, as opposed to the mortality salience condition. As evidenced by the plot of estimated means, the effect did occur in the uncertainty salience condition as well, though effects in that condition are not statistically significant in either experiment 1 or 2 with respect to this specific regression set. Regarding the significant MS x Political Ideology interaction, the effect is driven primarily by leftist/liberals (in experiment 1) at the statistically significant level, though, a nonsignificant effect in the predicted direction can be observed for right-wing/conservatives as well. For this same regression set in experiment 2, none of the simple slopes reached the threshold of statistical significance, but the pattern of means does replicate experiment 1 quite nicely. This identical pattern was achieved across both studies when political ideology was entered as the moderator.

Similarly patterned effects emerged for other variables in the *system justifying attitudes and worldviews* category, though not replicating across both studies. In experiment 2, social dominance orientation (SDO) exhibited a parallel pattern of polarization in the mortality salience condition. When exposed to the mortality salience

prime, the baseline effect became magnified for both those high and low in SDO (see Figure 6). When scores on the region specific (American) System Justification Scale (SJS) were entered as a moderator into the regression, again the same pattern, predicted by Hypothesis H2(y) emerged. Both generally, and within the control condition, those high in SJS disliked reformers more than their low SJS counterparts. When primed with MS, the effect became polarized at both ends, though primarily driven by those high in SJS (see Figure 7). Additionally, speaking to H2(y), an effect emerged in study 2 with regards to the Belief in a Just World (BJW) scale and the dependent variable of support for regime change. When this variable was entered into the equation as moderator, a significant effect emerged in the uncertainty condition, such that those low in BJW exhibited an increase in favorable attitudes towards regime change, the opposite being true for those high in BJW (see Figure 11).

A significant regression with respect to the dependent variable of Status Quo Preference Scale occurred in experiment 2 with political ideology as the moderator (see Figure 3). This regression produced a US x Moderator interaction, such that in the uncertainty condition, pre-existing attitudes again became polarized in the predicted fashion under priming. That is to say, right wing/conservatives' exhibited more negative attitudes towards reformers, and left wing/conservatives exhibited less negative attitudes. Decomposition of this interaction revealed that the significant effect was driven by conservative participants at the statistically significant level. Additionally, the variable of Party Identification produced a pattern duplicate to that described above (US x Party). Decomposition of this interaction revealed that the significant effect was driven by

Republican identifying participants, though a polarization on both sides of the isle is evident. In each case described above, the magnitude and direction of the effect coincides with the a-priori predictions provided by H2(y).

**Hypothesis 2(z).** Hypothesis 2(z) predicted that variables related to *non-ideological sociopolitical indicators* would moderate H1 effects in such a way that those who generally feel more politically involved and efficacious should exhibit a magnification/polarization of their baseline response; though this set of hypotheses was relatively more exploratory and peripheral compared to H2(x, y). Let us now discuss the effects which emerged relevant to this hypothesis grouping.

In study 1, a marginally significant US x Attention to politics effect emerged, such that those high in attention exhibited heightened negative attitudes towards reformers when primed with uncertainty. This effect was neither predicted by H2(z), statistically significant at the  $p < .05$  level in the decomposition of simple slopes, or replicated across studies. Thus, we are inclined to consider this a spurious effect, or at least one which falls outside the theoretical scope of this dissertation.

In study 2, a US x political self-efficacy (PSE) interaction emerged. This effect was such that when primed with uncertainty, those high in political self-efficacy exhibited heightened positive attitudes towards reformers, an effect consistent with H2(z). Also in study 2, a US x Trust in Government(TG) effect emerged such that, when primed with uncertainty, those highly trusting of government exhibited heightened attitudes towards reformers relative to baseline. This effect was not hypothesized, and the direction of the effect runs contrary to H2(z) (we would predict low trust to correlate with

more favorable attitudes toward reformers). Finally, a US x Trust in Government (TG) effect emerged with support for regime change as the dependent variable, such that those highly trusting of government became less supportive of regime change when primed with uncertainty relative to baseline. This effect is consistent with H2(z). We note, however, that the variable of Trust in Government was the one moderator variable not evenly distributed across conditions, and thus was correlated with the primed independent variable. Because of this, an assumption of interactive regression models was violated when employing this variable as a moderator (IV and moderator should be uncorrelated in such models), and thus conclusions with respect to this moderator should be met with caution. Overall, empirical support for the hypothesis 2(z) grouping is rather paltry.

### **Hypothesis 3**

Hypothesis 3 as described previously denotes a set of hypotheses broken down into three parts (x, y, z) corresponding to their respective moderator variable grouping discussed in the previous section. Hypothesis 3 posits that heightened uncertainty salience and the thirteen individual difference moderators should cause participants to exhibit an increased preference for the status quo and related constructs in an additive manner (producing independent, non-interacting effects). Since there were essentially no main effects of the manipulated independent variable in any of the studies contained herein, and the many predicted multiplicative effects were observed as described throughout, hypothesis 3 appears to have garnered no empirical support.



## **Hypothesis Summary**

The lack of main effects in either of the two studies suggests a refutation of hypothesis 1, without moderator interactions. This is theoretically interesting for a number of reasons. Studies within the uncertainty management literature (Hogg: 2000, 2004, 2005) and also the terror management literature (see Greenberg et al. 2008, for a review) employed independent variable manipulations identical to those used herein, and consistently produced main effects of these manipulations upon dependent variables relevant to the overarching theme of cultural worldviews, norms and values in a manner consistent with Hypothesis 1 as described herein.

The lack of replication of these established effects may be considered surprising. Even when an identical independent variable manipulation was utilized (the LEI in experiment 1), main effects failed to emerge. Thus, to some extent this could be considered a “fail to replicate” scenario. There are, however, notable differences between the present studies and the cited predecessors which may explain the non-replication. As noted earlier, the previous studies did not explicitly involve status quo preference related measures. Therefore, it is not altogether surprising that established effects of the independent variable manipulation did not translate to a new type of dependent variable. Moreover, the effects of transporting the experiment out of university psychology laboratories and into a remotely conducted internet survey should not be overlooked as a factor. Systematic research on the effects of taking surveys in-person vs. online is a fruitful area of future research which could prove both theoretically informative, as well as pragmatic. Recent reviews of the subject of differences in participant pool

characteristics between in-person college samples and Mturk participants, however, suggest that the populations behave more or less similarly (Paolacci & Chandler, 2014). Thus, we are disinclined to the idea that such differences (in the processing of materials, and characteristics of participant samples) between those studies and my own are the primary reason for a lack of main effects in these two experiments; though with such a new method for obtaining participants (Mturk), there may be systematic differences yet to be detected between populations.

Our dependent variables aimed to capture *status quo preference* and related manifestations (attitudes towards reformers, support for regime change), not preference for cultural worldviews or norms. We surmised that the findings pertinent to the latter would extend onto the former, but it was not a foregone conclusion. We expected the results regarding cultural worldviews and norms to extend to status quo preference type measures as a result of the high level of conceptual overlap among constructs in these categories. Namely, since the norms and worldviews espoused by a given culture represent the status quo of that culture, one might expect that similar effects might be achieved. On the other hand, a worldview or norm is different from an attitude, and indeed many participants (e.g. right leaning or Republican identifying participants during the current Obama administration) may feel that the political status quo as they understand it is directly counter to their worldviews.

### **Caveats and Mitigating Factors**

Recent discussions within the social science community present a strong case for requiring multiple replications of an effect prior to making bold claims of causality.

Previously well-established priming effects have failed to produce effects in recent replication attempts, suggesting to some that unseen procedural idiosyncrasies may exert a larger influence on results than previously imagined, hindering successful replication attempts, highlighting the capricious nature of some results, and casting longstanding theoretical conclusions into doubt (Pashler & Wagenmakers, 2012; Stroebe & Strack, 2014). The remedy to this problem is engaging repeated exact procedural replications, as well as varied conceptual replications. The corroboration of effects with respect to the moderator of political ideology across both studies mitigates some of these concerns, as the theoretically predicted effect emerged in an identical fashion across two different implementations of the independent variable manipulation. Additionally, similarly patterned interaction effects emerged with regards to several of the variables in the *system justifying attitudes and worldviews* category, suggesting that the discussed effects relevant to hypothesis H2(y) were not flukes, particularly for the key variable of political ideology and related variables.

Experimentwise type I error presents itself as a concern here, as 13 Moderator Variables x 3 Dependent Variables (this is taking into account only the models with all controls) produces 39 comparisons in each experiment. The amount of statistical comparisons performed herein could be considered excessive, inevitably leading to some type I error. For each study, the likelihood of producing at least one false positive is governed by the formula,  $\alpha_{ew} = 1 - (1 - \alpha_{pc})^c$  (Shaffer, 1995), where  $1 - (1 - .05)^{39} = .86$ . In other words, it is approximately 86% likely that at least one false positive emerges in each study, due to the sheer volume of statistical models fielded. In study 1, the US x

Attention effect is unpredicted, not consistent with known theories, and does not emerge again in study 2. Such factors lead us to conclude that it is highly likely the effect is spurious. In study 2, a couple interaction effects relevant to H2(z) emerged, yet they were sparse and the significant US x TG effect with respect to attitudes towards reformers emerged contrary to H2(z). With respect to support for regime change, the significant US x TG interaction did support H2(z), however this is the only evidence throughout in support of this hypothesis, and due to the uneven distribution/random assignment of trust in government across conditions in experiment 2, any conclusions here should be met cautiously.

H2(y) appears to have garnered support across studies with respect to political ideology as the moderator, and within experiment 2 among conceptually related variables in the *system justifying attitudes and worldviews* grouping. It could be said that drawing conclusions from study 2 with respect to H2(y) relevant effects should be approached cautiously, as they do not replicate in study 1. However, the characteristic predicted pattern of the effect among conceptually related moderator variables may be considered evidence supporting the robustness of this family of effects. If these effects were a result of experimentwise type I error, then it would be highly unlikely that a nearly identical pattern would manifest repeatedly, and that this pattern would happen by chance to manifest in accordance with the a-priori predictions of H2(y). Thus, for individuals high on *system justifying attitudes and worldviews*, exposure to mortality salience and/or uncertainty salience polarizes pre-existing attitudes. The case for this effect is most

evident with respect to the moderating variable of Political Ideology, with attitudes towards reformers as the dependent variable, as replicated across experiments.

### **Terror Managements Versus Uncertainty Management**

In its initial conception, part of the intent of the present project was to corroborate findings such as those of Van den Bos et al. (2005) in demonstrating the greater strength and applicability of uncertainty salience manipulations relative to mortality salience manipulations. It is important to note that the formally hypothesized effects initially presented herein allowed for MS x Moderator interactions, yet the hypothesized effects specifically concerned the US manipulation. Four out of seven significant findings in the H2(y) family entailed a US x Moderator interaction, while three out of seven entailed a MS x Moderator interaction. In the strict sense of having predicted effects primarily for US (and not MS), one might feel justified in suggesting that support for the a-priori formal hypotheses was somewhat lacking; though, in the eyes of the author, all of the hypotheses were expected to manifest for both US and MS manipulations, as the previous research upon which the extant studies are based was known to establish this pattern for MS, though not with status quo preference relevant measures(status quo preference scale, attitudes towards reformers, support for regime change) as the larger dependent variable construct. The consistent pattern of MS/US x Moderator interactions speaking to H2(y) showcase a predicted re-occurring pattern, lending credence to this family of hypotheses.

Across studies, the prime x political ideology interaction predicting attitudes towards reformers manifested itself in the pattern predicted a-priori, H2(y), producing what might be called an “extremity,” “magnification” or “polarization” effect, such that

pre-existing relations between the moderator and the dependent variable became more extreme under conditions of the prime. In each regression, either the MS x Moderator emerged significant, or the US x Moderator interaction did, but never did both interactions reach the threshold of statistical significance within the same model.

### **Final Thoughts**

The results produced herein may be theoretically informative on a number of accounts speaking to related, yet distinct lines of research within social psychology. These findings could be seen as running somewhat contrary to the Van den Bos studies reported in which the uncertainty salience effect repeatedly outshined the mortality salience effect when using priming materials identical to those in experiment 1. In the current experiments, mortality salience is demonstrated to be more or less equally strong as uncertainty salience in producing significant effects. We found that out of the three dependent variables, it was participants' attitude towards reformers (the person enacting change), which served as the dependent variable engendering most of the significant effects. We suggest that this is no coincidence, but rather a result of judgments regarding people themselves being characteristically different than those of abstract concepts or hypothetical futures. This, however, is mere speculation and further research would be needed to explore such an idea.

When exposed to the experimental primes, participants' pre-existing proclivities (on the moderating variables generally falling into the *system justifying worldviews* category) became more extreme/polarized/magnified. Previous theoretical work has discussed the idea that under conditions of high stress or cognitive load, both liberals'

and conservatives' attitudes become magnified, producing what have been in the past referred to as "extremity effects." Other theoretical frameworks suggest that situational primes including those deployed herein should cause both liberals and conservatives to simply become more conservative, an idea sometimes referred to as the "conservative shift hypothesis." The extant studies are thus informative with regards to this debate, demonstrating extremity effects across a variety of related variables in this hypothesis grouping H2(y), particularly that of political ideology. As far as the current author is aware of, experiment 2 is the first to use a word search type exercise as a successful method of concept priming. Many have heard the apocryphal tale of World War II propaganda being disseminated to citizens of various nations via word searches. The extant results suggest that these kinds of word puzzles may indeed be quite an effective technique. We found that it was sometimes Liberals (or those low in system justifying worldviews and attitudes), and sometimes conservatives (or those exhibiting high levels on this variable grouping) who exhibited the more pronounced polarization effect in each specific case, as evidenced by the significance levels of the simple slopes analyses. It is important to note, however, that in all cases the hypothesized directional pattern of means was exhibited by both those on the left/liberal end of the spectrum and those on the right/conservative end of the spectrum. In no case did the pattern of means appear to affect only one side of the continuum.

This finding may be of interest to those studying the interactive influence of ideology and emotional processes on politically relevant attitudes. Some lines of research suggest that the achieved effects would be expected to occur primarily among

conservatives, as some studies find conservatives to be more emotionally reactive to negative stimuli (Inbar, 2009). An emerging counterpoint to this idea, however, suggests that those on the right are generally more “rigid” and less psychologically flexible; (Pliskin et al. 2014, see Kashdan & Rottenberg, 2010 for a review), thus predicting the effects to be driven primarily by those low on system justifying views/liberals. In some cases of significant effects relevant to H2(y), the situational prime demonstrated lesser change/flexibility of attitudes among conservatives (and those who are high on system justifying attitudes and worldviews generally), while in other instances the reverse was true. In all cases, however, as evidenced by the figures, it appears that a magnification/polarization of pre-existing attitudes occurred for both those low and high on the moderator variable, even if one side (low or high) reached the threshold of statistical significance while the other did not.

A diverse array of empirical research stemming from both psychology and economics suggests that there exists a general tendency for people to prefer the status quo over alternatives, all else being equal. This dissertation investigated such hypotheses from a motivated cognition perspective, with the drive to retreat from uncertainty and avoid death serving as the underlying motivating constructs. From the extant studies, we find evidence in favor of the idea that terror management and uncertainty management processes activate social cognitive mechanisms directly favoring the status quo (and, specifically the individuals who uphold it), an effect heretofore not established in the literature.



In the face of death and uncertainty, it appears that people tend to “stick to their guns.” According to Milburn & Conrad (1998), our reactions to such stimuli are shaped as part of our socio-political development, with conservatives being least likely to embrace change because they are less willing and motivated to believe that the world is innately unjust. The polarization effects uncovered in the extant studies may shed some light upon seemingly intractable conflicts in which escalation of hostilities appears inevitable. Interpersonal and intergroup hostilities often escalate in a climate of scarce resources and/or ongoing war, to the detriment of both belligerent parties. This study demonstrates that situational triggers of death and uncertainty cause individuals to polarize their attitudes; they do not relent, or shift in a unidirectional fashion (as suggested by the “conservative shift” hypothesis). Polarization of pre-existing political attitudes (or system justifying attitudes and worldviews more broadly) will likely exacerbate, rather than alleviate conflict situations. Thus, situational primes of death and uncertainty cause those already predisposed towards or against political reformers to become more extreme in their views. Future research is warranted to investigate whether or not the polarization effect holds for other kinds of primes by which a more ancestral causal mechanism for the effect may be pinpointed (e.g. only negative valence primes, only high arousal primes), or if the polarization effect occurs specifically within the framework of “existentially relevant” constructs. Regardless, the current experiments demonstrate that death and uncertainty fan the flames of pre-existing political views regarding the status quo and those who aim to change it.

**APPENDIX**  
**SURVEY MEASURES**

## **Independent Measures.**

### **(Condition A) Uncertainty Condition:**

**“INSTRUCTIONS:** In this part of the study we are interested to see what people think and feel when they are uncertain. Please read carefully the following two questions and reply as honestly as you can. Remember, there are no right or wrong answers; we are interested in what YOU think and feel.

**1) Please briefly describe the emotions that the thought of your being uncertain arouses in you.**

[Free Response]

**2) Please write down, as specifically as you can, what you think physically will happen to you as you feel uncertain.**

[Free Response]”

### **(Condition B) Mortality Salience Condition:**

**“INSTRUCTIONS:** In this part of the study we are interested to see what people think and feel about death. Please read carefully the following two questions and reply as honestly as you can. Remember, there are no right or wrong answers; we are interested in what YOU think and feel.

**1) Please briefly describe the emotions that the thought of your death arouses in you.**

[ Free Response]

**2) Please write down, as specifically as you can, what you think physically will happen to you as you die.**

[Free Response]”

### **(Condition C) Control Condition:**

**“INSTRUCTIONS:** In this part of the study we are interested to see what people think and feel when they watch TV. Please read carefully the following two questions and reply as honestly as you can. Remember, there are no right or wrong answers; we are interested in what YOU think and feel.

**1) Please briefly describe the emotions that the thought of your watching TV arouses in you.**

[ Free Response]

**2) Please write down, as specifically as you can, what you think physically will happen to you as you watch TV.**

[Free Response]”

**Scale: Positive Affect Negative Affect Schedule (PANAS, short form)**

**INSTRUCTIONS:** On this page there is a scale consisting of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer. Indicate to what extent you feel this way right now, that is, at the present moment.

- 1 very slightly  
2 a little  
3 moderately  
4 quite a bit  
5 extremely

- \_\_\_\_\_ 1. Alert
- \_\_\_\_\_ 2. Afraid
- \_\_\_\_\_ 3. Active
- \_\_\_\_\_ 4. Upset
- \_\_\_\_\_ 5. Attentive
- \_\_\_\_\_ 6. Hostile
- \_\_\_\_\_ 7. Determined
- \_\_\_\_\_ 8. Nervous
- \_\_\_\_\_ 9. Ashamed
- \_\_\_\_\_ 10. Inspire

### Dependent Measures.

**Scale:** Preference for Change scale vs. Status Quo Scale (PFC).

**INSTRUCTIONS:** Please rate your level of agreement with the following statements

1 = *Strongly Disagree*

7 = *Strongly Agree*

1. Societal changes should be met with caution.	1	2	3	4	5	6	7
2. I like to do the same old things rather than try new and different ones.	1	2	3	4	5	6	7
3. I prefer having a stable routine to experiencing changes in my life.	1	2	3	4	5	6	7
4. Making major changes in society is usually not worth the trouble.	1	2	3	4	5	6	7
5. I like things which are familiar, rather than that which is different and unknown.	1	2	3	4	5	6	7
6. Staying the course in life is necessary for success.	1	2	3	4	5	6	7
7. Generally, change is a negative thing.	1	2	3	4	5	6	7
8. Change in life usually comes with great costs.	1	2	3	4	5	6	7
9. When things don't go according to plans, it stresses me out.	1	2	3	4	5	6	7

**Scale:** Attitudes Toward Reformers.

**INSTRUCTIONS:** Please rate your level of agreement with the following statements.

1	2	3	4	5	6
Strongly disagree	disagree	slightly disagree	Slightly agree	agree	strongly agree

1. Those who attempt to reform the system usually have ulterior motives.
2. Those who protest the political system are usually looking for handouts and unrealistic quick fixes.
3. Protesters are often a bunch of brats looking for attention.
4. Mass protests and reformation movements are rarely thought out.
5. Revolutionaries usually end up being worse than those which they rail against.
6. Reformers and protesters are society's great heroes.*

**Scale:** Support for Regime Change

**INSTRUCTIONS:** Please rate your level of agreement with the following statements.

1	2	3	4	5	6
Strongly disagree	disagree	slightly disagree	Slightly agree	agree	strongly agree

1. When the political rulers of a country become ineffective, they should be removed by any means necessary.

2. Though governments around the world often cause many problems for their citizens, changing a political system through regime change usually ends badly.\*

3. Governments around the world should take a look at the “Arab Spring” and get out of the way for who is next.

4. In politics, I tend to support the underdog/challenger rather than the already established candidate.

5. People should stop complaining about the government because whatever would replace it will probably be worse.\*

6. I like to see government change their leaders often, rather than rarely.

### **Manipulation Check, Control and Potential Mediating Variables.**

#### **Manipulation Check:**

**INSTRUCTIONS:** Recall from earlier the writing exercise at the beginning of the survey.

Please rate the extent to which you were thinking about the following topics while writing down your answers earlier.

(1 = did not think about at all, 7 = thought very much about)

1. Uncertainty
2. Watching T.V.
3. Death

#### **Control and Potential Mediating Variables (aka Thoughts/Feeling Measures):**

**INSTRUCTIONS:** Recall from earlier the writing exercise at the beginning of the survey. Please rate the extent to which you thought about or felt the following while writing down your answers earlier.

(1 = did not feel at all, 7 = felt very much)

1. I thought about or felt death and dying. \_\_\_\_
2. I thought about or felt anxious. \_\_\_\_
3. I thought about or felt insecure. \_\_\_\_
4. I thought about or felt threatened. \_\_\_\_

### Individual Difference Measures.

**Scale:** IUS (Uncertainty Intolerance Scale)

**INSTRUCTIONS:** Please select the answer that best corresponds to how much you agree with each item.

	Not at all characteri stic of me	A little characteri stic of me	Somewha t characteri stic of me	Very characteri stic of me	Entirely characteristic of me
1. Unforeseen events upset me greatly.	1	2	3	4	5
2. It frustrates me not having all the information I need.	1	2	3	4	5
3. Uncertainty keeps me from living a full life.	1	2	3	4	5
4. One should always look ahead so as to avoid surprises.	1	2	3	4	5
5. A small unforeseen event can spoil everything, even with the best of planning.	1	2	3	4	5
6. When it's time to act, uncertainty paralyses me.	1	2	3	4	5
7. When I am uncertain I can't function very well.	1	2	3	4	5
8. I always want to know what the future has in store for me.	1	2	3	4	5
9. I can't stand being taken by surprise.	1	2	3	4	5
10. The smallest doubt can stop me from acting.	1	2	3	4	5
11. I should be able to organize everything in advance.	1	2	3	4	5
12. I must get away from all uncertain situations.	1	2	3	4	5



**Scale:** Intolerance of Ambiguity Scale (IAS)

**INSTRUCTIONS:** Please rate your level of agreement with the following statements.

1	2	3	4	5	6
Strongly disagree	disagree	slightly disagree	Slightly agree	agree	strongly agree

1 An expert who doesn't come up with a definite answer probably doesn't know too much.

2. There is really no such thing as a problem that can't be solved.

3. A good job is one where what is to be done and how it is to be done are always clear.

4. In the long run it is possible to get more done by tackling small, simple problems rather than large and complicated ones.

5. What we are used to is always preferable to what is unfamiliar.

6. A person who leads an even, regular life in which few surprises or unexpected happenings arise, really has a lot to be grateful for.

7. I like parties where I know most of the people more than ones where all or most of the people are complete strangers.

8. The sooner we all acquire similar values and ideals the better.

9. I would like to live in a foreign country for a while.\*

10. People who fit their lives to a schedule probably miss most of the joy of living.\*

11. It is more fun to tackle a complicated problem than to solve a simple one.

12. Often the most interesting and stimulating people are those who don't mind being different and original.

13. People who insist upon a yes or no answer just don't know how complicated things really are.\*

14. Many of our most important decisions are based upon insufficient information.

15. Teachers or supervisors who hand out vague assignments give a chance for one to show initiative and originality.\*

16. A good teacher is one who makes you wonder about your way of looking at things. \*

**Scale:** System Justification Scale (2013)

**INSTRUCTIONS:** Please rate your level of agreement with the following statements.

1	2	3	4	5	6
Strongly disagree	disagree	slightly disagree	Slightly agree	agree	strongly agree

1. Everyone has a fair shot at wealth and happiness in America.
2. In general, I find American society to be fair.
3. Most of America's policies serve the greater good.
4. In general, America's political system operates as it should.

**Scale:** SDO (Social Dominance Orientation)

**INSTRUCTIONS:** Please rate your level of agreement with the following statements.

1 = Strongly Disagree

7 = Strongly Agree

1. Some groups of people are simply inferior to other groups.	1	2	3	4	5	6	7
2. In getting what you want, it is sometimes necessary to use force against other groups.	1	2	3	4	5	6	7
3. It's OK if some groups have more of a chance in life than others.	1	2	3	4	5	6	7
4. To get ahead in life, it is sometimes necessary to step on other groups.	1	2	3	4	5	6	7
5. If certain groups stayed in their place, we would have fewer problems.	1	2	3	4	5	6	7
6. It's probably a good thing that certain groups are at the top and other groups are at the bottom.	1	2	3	4	5	6	7
7. Inferior groups should stay in their place.	1	2	3	4	5	6	7
8. Sometimes other groups must be kept in their place.	1	2	3	4	5	6	7
9. It would be good if groups could be equal.	1	2	3	4	5	6	7
10. Group equality should be our ideal.	1	2	3	4	5	6	7
11. All groups should be given an equal chance in life.	1	2	3	4	5	6	7
12. We should do what we can to equalize conditions for different groups.	1	2	3	4	5	6	7
13. Increased social equality is beneficial to society.	1	2	3	4	5	6	7
14. We would have fewer problems if we treated people more equally.	1	2	3	4	5	6	7
15. We should strive to make incomes as equal as possible.	1	2	3	4	5	6	7
16. No group should dominate in society.	1	2	3	4	5	6	7

**Scale:** Belief in a Just World Scale (BJW)

**INSTRUCTIONS:** Below you will find various statements. Most likely, you will strongly agree with some statements and strongly disagree with others. Sometimes you may feel more neutral. Read each statement carefully and decide to what extent you personally agree or disagree with it. Make the selection which best corresponds to this judgment.

1	2	3	4	5	6
Strongly disagree	disagree	slightly disagree	Slightly agree	agree	strongly agree
1. I think basically the world is a just place.	1	2	3	4	5 6
2. I believe that, by and large, people get what they deserve.	1	2	3	4	5 6
3. I am confident that justice always prevails over injustice.	1	2	3	4	5 6
4. I am convinced that in the long run people will be compensated for injustices.	1	2	3	4	5 6
5. I firmly believe that injustices in all areas of life (e.g. professional, family, politics) are the exception rather than the rule.	1	2	3	4	5 6
6. I think people try to be fair when making important decisions.	1	2	3	4	5 6

**Scale:** (M10) Political Ideology

**INSTRUCTIONS:** Please answer the following questions by choosing the answer which most closely represents you.

1. We hear a lot of talk these days about liberals and conservatives. I'm going to show you a seven-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative. Where would you place yourself on this scale, or haven't you thought much about this? *(please circle your answer)*

- 1- Extremely Conservative
- 2- Conservative
- 3- Slightly Conservative
- 4- Moderate, Middle of the Road
- 5- Slightly Liberal
- 6- Liberal
- 7- Extremely Liberal
- 8- Haven't Thought
- 9- Don't Know/Other/NA

**Scale: Partisanship (Party ID)**

2. Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what?

1. strong democrat
2. weak democrat
3. independent-democrat
4. independent-moderate
5. independent republican
6. weak republican
7. strong republican
8. libertarian
9. other, N/A

**Scale: Trust in Government**

**INSTRUCTIONS:** Following is a survey of political attitudes, behaviors, beliefs, and values. Some of the items ask you to recall events from the past and so it is understood that the information depends on the “best of your recollection.” But whatever you can provide is greatly appreciated.

1. If you took a complaint about your community to a local government elected official (i.e., city council member, county supervisor, school board member, etc.), do you believe that she or he would pay a lot of attention, some attention, very little attention, or no attention at all to your complaint?
  - ☐ No attention
  - ☐ Very little attention
  - ☐ Some attention
  - ☐ A lot of attention
2. If you took a complaint about the national government to a representative of the national government, do you believe that she or he would pay a lot of attention, some attention, very little attention, or no attention at all to your complaint?
  - ☐ No attention
  - ☐ Very little attention
  - ☐ Some attention
  - ☐ A lot of attention
  - ☐ A lot of attention

**Scale: Political Self-Efficacy**

3. How much influence do you believe someone like you can have over decisions made by local government?
- ☐ No influence
  - ☐ Very little influence
  - ☐ Some influence
  - ☐ A lot of influence
4. How much influence do you believe someone like you can have over decisions made by the national government?
- ☐ No influence
  - ☐ Very little influence
  - ☐ Some influence
  - ☐ A lot of influence

**Scale: Political Interest**

5. Thinking about your local community, how interested are you in local community politics and local community affairs?
- ☐ Not Interested
  - ☐ Slightly Interested
  - ☐ Somewhat Interested
  - ☐ Very Interested
6. How interested are you in national politics and national affairs?
- ☐ Not Interested
  - ☐ Slightly Interested
  - ☐ Somewhat Interested
  - ☐ Very Interested

**Scale: Political Attention**

7. Thinking about your local community, how much attention do you pay to local community politics and local community elections?
- ☐ No attention
  - ☐ Not much attention
  - ☐ Some attention
  - ☐ A lot of attention
8. How much attention do you pay to national politics and national elections?
- ☐ No attention
  - ☐ Not much attention
  - ☐ Some attention
  - ☐ A lot of attention

**Scale: Political Knowledge**

9. In general, how knowledgeable do you consider yourself to be about local community politics?
- ☐ Not knowledgeable
  - ☐ Not very knowledgeable
  - ☐ Somewhat knowledgeable
  - ☐ Very knowledgeable
10. In general, how knowledgeable do you consider yourself to be about national politics?
- ☐ Not knowledgeable
  - ☐ Not very knowledgeable
  - ☐ Somewhat knowledgeable
  - ☐ Very knowledgeable

**Scale: Voting Behavior**

11. Have you ever participated in a political action or activity?  
Y/ N
12. Do you anticipate voting in the general (November) elections?  
Y/ N

## Experiment 2 priming materials:

### (Condition A) Uncertainty Condition:

**INSTRUCTIONS:** This is a word search puzzle. Please attempt to find (visually locate with your eyes) the following words in the puzzle: UNCERTAIN, DICEY, GAMBLE, SHAKY, WAVERING. Please time yourself using <http://www.online-stopwatch.com> or by your timing method of choice. Spend 2 MINUTES searching for the words in caps above, and then stop.

**When you locate the words, simply remember WHICH of the words you located and WHERE on the puzzle you saw them. When approximately 2 minutes have completed, click to the next page.**

P	I	P	A	G	S	H	A	K	Y	L	R	D	I	C
Y	G	A	O	N	W	O	A	R	B	L	F	E	C	Y
P	O	Q	T	I	F	H	D	M	H	Q	I	Q	D	E
P	E	P	A	R	V	N	A	T	A	M	Z	I	P	E
M	G	B	K	E	E	G	O	F	S	A	F	Y	S	R
L	X	Y	X	V	K	C	J	Z	V	N	K	T	Y	E
Q	X	F	H	A	Q	Y	N	J	O	B	D	L	N	W
C	T	D	P	W	J	V	P	U	H	F	V	I	H	X
A	F	M	Z	T	D	V	C	J	S	Y	P	S	J	C
Y	O	P	L	X	M	K	O	K	Z	D	D	V	F	T
M	V	E	I	U	F	O	V	L	G	W	I	B	S	P
K	X	W	E	T	W	H	K	Y	V	A	R	C	F	G
O	Z	T	K	X	Y	C	Y	T	Z	G	W	C	E	U
M	L	X	A	D	Q	E	G	W	O	E	C	Y	M	Y

**(Condition B) Mortality Salience Condition:**

**INSTRUCTIONS:** This is a word search puzzle. Please attempt to find (visually locate with your eyes) the following words in the puzzle: DEATH, MORTAL, GRAVE, TOMBS, DEMISE. Please time yourself using <http://www.online-stopwatch.com> or by your timing method of choice. Spend 2 MINUTES searching for the words in caps above, and then stop.

**When you locate the words, simply remember WHICH of the words you located and WHERE on the puzzle you saw them. When approximately 2 minutes have completed, click to the next page.**

G	Q	F	C	Y	T	L	E	B	L	V	E	H	W	W
T	R	P	Z	R	C	K	F	I	A	J	J	L	U	U
T	M	A	B	W	D	D	E	A	T	H	P	D	T	E
R	S	X	V	O	I	Q	X	O	R	Q	A	S	J	R
M	Y	T	G	E	U	K	O	E	O	M	W	W	Q	L
K	K	O	V	S	I	O	R	I	M	E	E	X	A	I
G	G	M	G	A	E	K	G	J	Q	X	V	H	Y	S
O	G	B	A	S	X	W	R	B	H	R	O	P	L	H
Y	A	S	I	M	H	T	H	Z	D	Q	U	B	J	N
O	W	M	W	U	W	A	O	H	R	T	A	H	X	V
W	E	R	H	D	Q	O	E	D	Z	Z	Z	V	T	Y
D	F	A	X	S	R	N	Z	G	A	U	K	C	G	C
V	G	V	H	N	O	X	L	K	E	O	J	A	G	U
Q	W	D	E	O	Z	L	J	R	V	T	I	J	F	F
C	U	X	Q	V	Y	V	U	U	D	G	V	B	N	Q



**(Condition C) Control Condition:**

**INSTRUCTIONS:** This is a word search puzzle. Please attempt to find (visually locate with your eyes) the following words in the puzzle: TELEVISION, DUST, GOGGLES, AFTERNOON, SPOT. Please time yourself using <http://www.online-stopwatch.com> or by your timing method of choice. Spend 2 MINUTES searching for the words in caps above, and then stop.

**When you locate the words, simply remember WHICH of the words you located and WHERE on the puzzle you saw them. When approximately 2 minutes have completed, click to the next page.**

E	K	Y	O	T	I	S	B	E	Q	L	I	Q	W	A
T	U	Z	Z	E	Q	N	H	S	P	B	H	Z	H	C
I	S	X	X	L	J	I	P	Y	Z	J	Y	R	U	G
P	V	U	C	E	K	L	S	O	Z	A	A	J	O	G
N	F	N	D	V	J	R	R	P	A	F	G	I	R	W
O	B	Q	R	I	H	R	R	C	T	O	O	D	N	H
V	J	E	S	S	L	X	S	E	L	G	G	O	G	Q
J	V	B	H	I	X	Q	R	O	L	S	Q	L	H	G
G	G	H	B	O	S	N	Q	Z	Q	D	X	S	B	K
B	W	F	J	N	O	X	E	Y	N	R	L	W	T	R
M	J	Y	Y	O	P	U	V	A	H	Y	W	V	O	P
E	A	C	N	V	U	K	K	P	H	R	R	A	P	R
X	J	E	A	S	K	S	P	P	F	Z	T	L	S	Z
C	M	J	C	K	Z	W	Y	G	O	A	Y	W	U	F
X	R	X	W	H	N	I	P	H	S	V	I	N	P	J

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## **VITA**

Dr. Cheng was born and raised in Chicago, IL. Before attending Loyola University Chicago, he attended the University of Illinois, Urbana-Champaign, where he earned a Bachelor of Arts in Psychology and a Bachelor of Science in Business Administration. Dr. Cheng received his master's degree from Loyola in 2010. Currently, he lives in Chicago, IL.

